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Interactive Dynasty: An Effective Way to Learn About the Tang Dynasty History

Xiangyin Li

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Masters of Fine Arts in Visual Communication Design

Rochester Institute of Technology
College of Imaging Arts and Sciences
School of Design
Rochester, NY
February 20, 2017

Title **Interactive Dynasty: An Effective Way to Learn About the Tang Dynasty History**

Submitted by Xiangyin Li

Date May 19, 2017

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Abstract

Today, interaction design is applied to multiple areas of visual communication and instructional design. Interactive elements can be found in websites, apps, and kiosk terminal equipment. Through the integration of interactive content such as step-by-step tutorials, the user can acquire a variety of different types of information efficiently and effectively to learn about historical events.

China has one of the longest and continuous cultures today. Its own unique charisma attracts many history buffs to learn more about important historical events. Kiosk terminals in history museums have successfully provided a learning environment for users to learn about China through interaction design. This thesis project will take advantage of these museum kiosk terminals and turn them into a more widely used tool via an online website. Specifically, my thesis will focus on designing interactive content regarding the history of the Tang Dynasty.

The Tang Dynasty is the best-known dynasty of ancient China. The goal is to discover how people could learn about it through interesting interactions without having to read historical books. How could people become familiar with history through a non-linear interactive website, instead of watching documentaries or reading textbook which follow a linear story? How can the author design a historical timeline about the Tang Dynasty that is convenient to use and learn from without the user having to go to museums? These are the problems the author intended to solve using interaction design. The goal of this thesis is to make an interactive website to learn about the Tang Dynasty.

Web design offers a wide range of interactive possibilities. So my thesis project will focus on:

- 1 **User interface layout:** well-designed site with a functional timeline
- 2 **Integrated content:** designed modularly into small topics for better retention
- 3 **Interactive informational graphics:** assist in explaining complex historical events
- 4 **Motion graphics:** animated historical events that lead to the rise and fall
- 5 **Audio narration:** compliment the visual elements to assist in learning

Keywords:

Tang Dynasty, China, interaction design, UI design, UX design, motion graphics

Problem Statement

China is one of the world's oldest and richest continuous cultures, being over 5000 years old. The country attracts millions of people who are curious about its history. Users seeking to learn more about Chinese history have the following choices available: books, video documentaries, and the terminal kiosks in museums. Reading history books could be boring for more visual learners. Documentaries are a passive experience where the user watches a linear story. The author's inspiration came from the terminal kiosks in a Chinese history museum. However, these terminal kiosks are usually permanently installed in a particular place and are not mobile. For example, you can only use them in the specific museums. Also, those kiosks were mainly designed for users using a short time to scan but not sit and learning carefully. Designers of these kiosks have also included lots of text on every screen. This design project focus on communication design in allowing everyone to learn about the history of the Tang Dynasty at home in a more visual and interactive way. Users can learn what they want to know by watching animations, listening to the narration, and clicking on interactive content.

The target audience for this website is individuals who are curious about the Tang Dynasty history. The core content of the site would be the major events that occurred during the period between 634AD to 896 AD, which is the completion and destruction year of the Tang's royal palace – Daming Palace. The author will use interaction design, motion graphics, and illustration to visualize the historical events. The author will first research and structure the data about the Tang Dynasty. Then The author will use illustration software (Adobe Illustrator) to draw the graphic elements for the animation and the user interface's layout. After that, The author would use animation software (Adobe Flash) to make the motion graphics pieces. Finally, The author will combine all of the content using web design software (Adobe Dreamweaver) to create the entire website.

The goal is for people to learn about the Tang Dynasty history at their own pace in a relaxing and visually appealing way. This goal is providing an interactive model or template for other historical online sites.

Review of Literature

For this thesis project, the author wanted to create a historical timeline of the Tang Dynasty and build it into a website. The goal is to show historical facts about China during the Tang Dynasty. These historical events include: how the Tang Dynasty started and why China was the center of the world during that period. The historical timeline will describe the citizens and imperial families' living conditions. Since the author really like history, the author wanted to make a website to show the history line from the birth of the destruction of Tang Dynasty's royal palace – Daming Palace. During this period, the users will see how an Empire expanded its territory, developed its diplomacy, strengthened its army, and how such powerful empire came to an end. The author will provide a complete website and also showcase the design process from start to finish for the author's Thesis presentation.

Subject Matter

The heart of Chinese poetry

Greg Whincup

1987

This book resolved 57 of the greatest Chinese poems in detail. It let those poems come alive for Western readers. The author thought that none of the Chinese poems are aliens. They are all human's culture. Poetry is the heart of Chinese culture. So the heart of Chinese poetry beats in us, too. From this book, the author can easily know how to resolve the Chinese poems of Tang Dynasty to all users in an understandable way.

Empress Wu the Great: Tang dynasty China

Woo, X. L.

Algora Publishing

2008

This book supplies the history of the only female emperor in Tang Dynasty in China. It mainly focuses on the entire life of Wu Zetian. It explains how and why Wu Zetian became the Emperor. It also tells how she developed the society of China during that period. This book will be useful in organizing the history content.

Li Shi Min, Founding the Tang Dynasty: Strategies that Made China the Greatest Empire in Asia

Hing Ming, Hung

Algora Publishing

March 2013

This book supplies the history of Sui Dynasty to the end of Tang Dynasty in China. It mainly concentrates on the history of the royal family. It discusses the cause of Tang Dynasty's creation. It also tells how the emperors rule the entire country and the situations and development of that period. This book will be useful in collecting

the content of the design.

History of Imperial China: China's Cosmopolitan Empire: The Tang Dynasty

Lewis, Mark Edward
Harvard University Press
June 2009

This book mainly records the details about the society of Tang Dynasty. It describes such as the geography, foundation, warlords and monopolists, religion, urban and rural life of the empire. It also shows the map of China by different time periods.. The author also discusses the Chinese culture, arts and constructions culture. It is a useful book for me to find lots of detail and data about Tang Dynasty.

Daily Life in Traditional China: The Tang Dynasty

Benn, Charles D.
Greenwood Press
December 2001

This book mainly records the details about the daily life of people in the Tang Dynasty. It describes lots of aspects such as house and garden, clothes and hygiene, food and feasts, leisure and entertainment. It also shows the public service such as the crime and punishments, sickness and health. It covers the history, philosophy, religion, literature, art and other disciplines to the nitty-gritty of ancient China. It is a useful book for me to integrate the information about Tang Dynasty.

Daming Palace

Tiemu Jin

Production Co: Xi'an Qujian Film & TV Investment Group Company
<http://english.cntv.cn/program/documentary/20111118/100113.shtml>
9 September 2009

The book is a very excellent documentary of Daming Palace. It described the history of Tang Dynasty by six parts. The parts were divided by periods. The content is comprehensive and exhaustive. The author could get lots of data from this documentary. This documentary also contained some funny stories which the author could not find from other places.

Technology

How to design website

By Alan Pipes
Laurence King Publishing 2011

This book shows website aesthetics and showcasing example of good design. It demonstrates how you finish a well-designed website without the need for costly programs. This book includes code, layout, text and typography. It also contains image and color schemes. This book would help me to complete the website by

teaching me the coding and design principals.

Design Tuts+

2014 Envato Pty Ltd.

<http://design.tutsplus.com/tutorials/create-a-gentle-flat-oriental-pattern-in-adobe-illustrator--cms-20952>

The website is a tutorial on how to draw simplified oriental pattern in Adobe Illustrator. In this tutorial, the author learned some effective way such as how to make lines and shapes symmetrical and how to make a geometric arrangement of curves. The tutorial made three examples: sakura, folding fan, and lantern. All these oriental things may appear on my website. This tutorial is located on a website called “Tuts+.” It is a tutorial website which provides thousands of tutorials and most of them are free.

CSS3 Animation Cheat Sheet

<http://www.justinaguilar.com/animations/#>

This website introduced some useful effects of CSS3 animation. The designer used a head portrait as the demonstration. And make some buttons for different effects. When you click the icon, the portrait will play the effect. At the end of the page, there is a download button. If you click it, you can download the CSS code of all the effects displayed on the page.

Create Different Styles of Hover Effects with CSS3 Only

2014, Mar 03

<http://www.queness.com/post/16216/create-different-styles-of-hover-effects-with-css3-only>

This article instructed me to make a hover effect on the thumbnail by showing the code of CSS3. With this effect, we can add some additional information on thumbnails. I would adjust the code depending on my style. It may be used to show the titles of different chapters.

Creative Button Styles

<http://tympanus.net/Development/CreativeButtons/>

This website is a demonstration of some useful and well-designed button hover effects. There would be a group of icons and buttons on my website. The author could learn its coding by seeing the elements by my browser. There are also some press buttons, original link and icon hover effects. You could watch them by clicking the link on the bottom of the page.

Design

Digital illustration

By Lawrence Zeegen

Roto Vision Publishing 2005

This book resolved some graphic designers' works. And those works are distributed by their style. The book tells how different graphic designers thought and how to put what they thought on the papers. Some of the works have steps to teach you how to achieve the effect. This book would help me to select a kind of style of the animation and also upgrade my skill of the illustration.

Vector graphics and illustration

By Jack Harris and Steven Withrow

Roto Vision Publishing 2008

This book combines graphic design and skill tutorial together. It contains the portfolio and viewpoints of different graphic designers. It also includes the tutorials of how to draw the vector diagram by computer software. This book would help me to complete the illustrations of the animation by using the computer software (Adobe Illustrator).

Never use pop-up windows

By Anneloes van Gaalen

BIS Publishing 2010

This book tells me over 50 ridiculous web rules. Although the author thought some of the rules still need to be considered, they still represent a part of users' viewpoints. The author would figure out how and why the author held these opinions. That would be helpful to me to collect and learn the user experiences.

Don't make me think

By Steve Krug

New Riders Publishing 2006

This book tells me about the user experiences rules and principles. Such as how to take full use of the web and how the users scan the billboard. It also points out the key steps about how to design the home page and how to avoid the common problem about usability. It gave me lots of useful experiences and recommendations of creating the interaction part of the websites.

Process

The project is an interactive website for computers and large screen mobile devices such as iPad. This site can let people learn about the Tang Dynasty through interaction design.

At First, the author collected the data of major events that occurred during the period between 626AD to 896 AD, which is the completion and destruction year of the Tang's royal palace – Daming Palace. The author got the data from websites and the books borrowed from the library. Then the author organized and summarized that data. The goal is to determine what the author needs to use in the timeline. Create a timeline with the corresponding data. Then the author brainstormed the visual effect of the motion graphics so that every story can express the event clearly and accurately. Sketch and draw the illustrations of the motion graphics. The author referred to the buildings, clothes and other design elements which present the ancient Chinese culture. The author generalized them and drew the illustrations with an appropriate cartoon style. After that, the author stated considering the wireframes of the website. Asking my advisors and other friends to give feedback, and make adjustments. Finally, the author built the whole website.

In this website, nine animations were the main content. Several other sections would help users to understand the nine animations. A timeline of the Tang Dynasty worked as a catalog. Users can select a particular event by clicking one of the icons on the timeline or start from the first. Every event page has its animation, characters, text and audio narration. The interactive part will consist of different icons on the web page, animation screens. Some scroll effects were also be added to the website. The content of the audio narration and the motion graphics were the data of the events with a visual narrative style. Every event page had an animation from 15 seconds to 1 minute.

**Step 1:
Story Inspiration**

As one of the most famous dynasty, the Tang Dynasty has a very glorious history. As a history lover, it's not hard for the author to tell some events that affected the Tang Dynasty most. So the author decided to choose nine events from them. Those events should include several kinds of content below:

1. Significant events that affect the Tang Dynasty history.

There are some great dramatic and inevitable events that made the Tang Dynasty as what we saw today. Such as the Xuanwu Gate Incident generate the first great emperor of the Tang Dynasty. An Lushan rebellion changed the Tang Dynasty from its peak to the end.

2. Great creation and innovation.

Undoubtedly, the imperial palace – Daming Palace is one of the greatest creations during the Tang Dynasty. Also, some innovations such as the official military selecting institution and the palace examination system are acting as milestones in the whole Chinese history.

3. Data that could reflect the greatness.

Some data such as the national territorial area and population could help users understand why China was such powerful during the Tang Dynasty. For example, In Tang Dynasty, there is a period called “Kaiyuan Period.” During Kaiyuan Period, 321 crown states and over 800 frontier states belonged to Tang. The population was over 50 million.

4. Famous emperors and ministers and their stories.

The focus of the Xuanwu Gate Incident – Li Shimin and the creator of the Kaiyuan Period – Li Longji are both very famous emperor. And another emperor, Wu Zetian, is the only female emperor in the whole Chinese history.

Step 2:
Animation Inspiration

The short animations of the nine events should mainly consist of 2 parts: Characters and backgrounds. The apparel system in Tang Dynasty is very complicating. Those garments were different from time periods, nationalities, areas, ages, sex, positions and lots of elements. The author thought it would be very easy to made mistakes if the author drew all the character with realistic style. Because the target audience should be age from 8 to 65, which means children should also be considered. The author decided to create a kind of cartoon style.

Step 3:
website Inspiration

Since the animations are the leading actors of the project, the primary functions of the website should be leading users to watch the animations and help users understand the animations. The website should include some parts such as the brief introduction of the characters and the maps of the Tang Dynasty in different periods.

The visual style of the website should fit the characters, maps and animations. Also, it should be simplified since users should put attentions on the main content of the website (characters, maps and animations.)

Information Flowchart

Story Flowchart

An information flowchart was created to show the concept of this project which is focusing on communication design in allowing everyone to learn about the history of the Tang Dynasty at home in a more visual and interactive way. Users can learn what they want to know by watching the animation, listening to the narration, and clicking on interactive content. The goal is for people to learn about the Tang Dynasty history at their own pace in a relaxing and visually appealing way. The goal is providing an interactive model or template for other historical online sites.

In this final website, nine animations were the main content. Several other sections would help users to understand the 9 animations. A timeline of the Tang Dynasty worked as a catalog. Users can select a particular event by clicking one of the icons on the timeline or start from the first. Every event page has its animation, characters, text and audio narration.

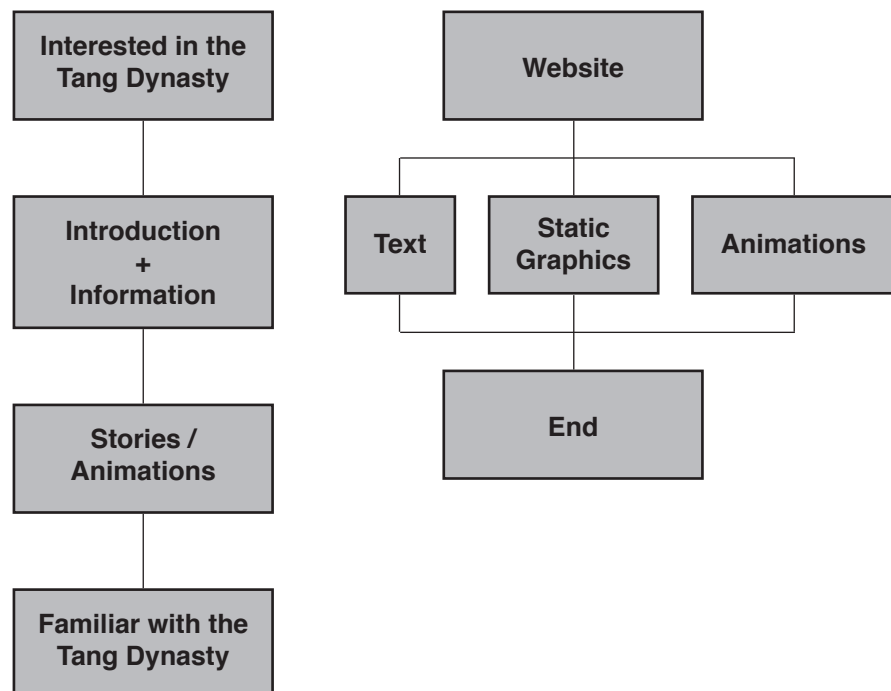


Figure 1: Story and website flowchart

Process Flowchart

Since the animations are act as the leading actors of the project, the primary functions of the website should be leading users to watch the animations and help users understand the animations. The website should include some parts such as the brief introduction of the characters and the maps that show the territory changes of the Tang Dynasty during different time periods.

After some researching and analyzing, the author finished the process workflow. This diagram visualized all the sections and pages that included on the website. The website would entirely contain five main parts:

1. “Welcome”

“Welcome” is the top section of the web page. Users would see this section first when they opened the website. The author drew an illustration as the main content of this section. The illustration included some elements of the Tang Dynasty. Also, there was a brief introduction under the illustration that tells what is the website mainly telling you about.

2. Historical Figures

This is the second section of the web page. All of the characters that appeared in the nine animations would be listed here. Users can select the specific characters to see their brief introductions. This section is mainly used for users to understand the animations easier.

3. Historical Events

This is the third section of the web page. It is also the central part because users can see the animation here. The main content of this section is a timeline with nine icons on it. Users could see the animations by clicking those specific icons.

4. Territory Changes

This section shows different maps of the Tang Dynasty during different time periods. These maps working as another information data besides the historical events could also help the user to understand the development of Tang and its neighboring countries.

5. Chang'an Today

This is the final section of the web page. It was a paragraph of the end words tells how the Tang Dynasty culture influence China and what Tang left to China today.

Target Audience

The target audience for this website is individuals who are curious about the Tang Dynasty history. Their age should be from 8 to 65. They also need basic computer skills (know how to browse the website) and English language skills.

Persona One

Name	Kevin Song
Age	10 years old
Background	Born and grow in New York City. His grandparents are Chinese.
Interests	Kevin usually heard his grandfather singing Beijing Opera. He can't understand what did his grandfather singing. Kevin's father told him it is a kind of Chinese opera. The content is some historical events occurred in the Tang Dynasty. Kevin searched the Tang Dynasty on the website and found the Chinese character of Tang – “唐.” He was so surprised because he noticed that this character was also printed on the Gate of China Town.
Challenges	Kevin felt quite interested in the Tang Dynasty. However, he cannot understand what his grandpa said because his grandpa can only speak Chinese. Also. The Chinese history books in the library are so thick for him to read. Kevin really hope there could be an easy and fun way for him to learn some basic knowledge of the Tang Dynasty.

Persona Two**Name**

Karin Webber

Age

32 years old

Background

A manager of a design company in Chicago.

Interests

Karin's company decided to have cooperation with a Chinese Company located in Xi'an, China. Last week she was told to have a business trip to Xi'an to visit that Chinese company and talk with the CEO for the details of the cooperation. Karin knows that Xi'an is the ancient capital of China. She felt she should learn some basic knowledge of Chinese history so that when the Chinese CEO invite her to visit some attractions, they can talk a little bit each other.

Challenges

Karin didn't want to spend too much time on learning the basic knowledge of Chinese history. She didn't have much patience to sit down and read the endless text. Karin hoped there could be a way for her to do it during a very short time. Maybe when she was waiting for the flight at the airport?

Animation Scripts

After collecting the data about the historical events of the Tang Dynasty, the author found that almost all of the key events were occurred during the period from the construction to the destroy of an imperial palace – Daming Palace. So the author decided to let the born of Daming Palace as the begin and the destroy as the end. In this 262 years, lots of famous people born and died during the period. Lots of coups occurred during the period. Lots of huge achievements accomplished during the period. The author chose 9 of the most representative events from them. These nine events would be what the nine animations mainly telling about.

After collecting the data of the 9 events, the author started to summarize those events and wrote the narration for them. During the process, the author tried to take the most relevant information and data from every event. Also, the author deleted everything controversial from the storyline to make the story simple but accurate.

Narration Text

Chapter 1

In 626 A.D, the 8th year of the Tang Dynasty was established. At the Xuanwu Gate of Capital Chang'an, for the supreme power, royals began to kill each other. At the dawn of June 4th, the second prince Li Shimin murdered his elder and younger brother. He finally got the highest position of the Empire. (20 sec)

Chapter 2

In the history of China, Li Shimin was an excellent emperor. During the 23 years of his incumbency, religion, agriculture, education and GDP all developed sharply. In 630 A.D, Northern Turkic peoples all submitted to China. The Protectorate General to Pacify the West moved from Anxi to Kucha. The Western Regions returned to Tang's landscape. The silk route became unimpeded again after the 300-years secession of Central Plains. The East and the West reconnected. The light of Chang'an began to illuminate the world. Li Shimin created the most remarkable period – Zhenguan Period. (38 sec)

Chapter 3

The Xuanwu Gate Incident caused a haunting pain in the heart of Li Yuan, who is the father of Li Shimin. Yuan's sons killed each other at Xuanwu Gate also made Li Yuan and Li Shimin estranged. A minister suggested to Li Shimin that he build a Summer Palace for Li Yuan. The minister felt that building a summer palace for the emperor's father would show the filial piety of the emperor. Since the empire was developing smoothly and the treasury was also surplus, Li Shimin followed the minister's advice and named the palace "Daming". In 635 A.D, thousands of craftsmen assembled at the Northeast of Chang'an and started building the palace.

However, after several months, Li Yuan died. The construction stopped abruptly.
(35 sec)

Chapter 4

In 649 A.D, Li Shimin died. His son – Li Xian inherited the throne. Li Xian suffered from serious wind apoplexy and he didn't want to live in the old royal palace which was wet and small. In 662 A.D, the emperor appointed a minister, Liang Xiaoren, as the construction surveyor and the famous painter, Yan Liben, as the designer. The Daming Palace started rebuilding. However, it would not become only a summer palace but the most honorable construction – a new royal palace.

The Treasury spent 15 states' tax revenue and also suspended the one-month salary of all the officials in Chang'an. Relying on the steady accumulation of the past years. The project progressed smoothly. In 663 A.D, the entire imperial household moved in to the new royal palace.

Chapter 5

In 679A.D, the general Pei Xingjian escorted the prince of Persia back to West. In the West of Tianshan Mountain, the army of Tang defeated the Eastern Turks who rebelled against Tang over 100 years ago. And on the way back, the army of Tang subdued the North Turk nobles. The prestige of Tang's military spread over the world. Tang's territory was from Japan Sea to the Aral Sea; from North Vietnam to the Lake Baikal. The distance from the East to the West is 4755km and 8459km from the North to the South. Tang became the center of the world.

Chapter 6

In 690A.D, a woman, Wu Zetian, ascended the throne. In order to get the supreme power and the title that only belonged to males, she had struggled all her life. In the 2100-years Chinese Feudal Society, she is the only one female. She was taken to the palace when she was 14, was forced to be a Buddhist nun when she was 26, became empress when she was 32, held power when she was 60 and finally ascended to the throne when she was 67 years old. As a female, Wu Zhetian was absolutely myth of male-dominated society. For the Tang Dynasty, she left a rich cultural heritage. She created the official military selecting institution and the palace examination system in Daming palace. From that period, civilians with imperial examination background began to replace the peel of the realm. Wu Zetian was a beautiful rainbow, lighting up the sky of Tang.

Chapter 7

In 710 A.D., another coup broke out in Xuanwu gate again. In Chinese traditional culture, Xuanwu is a great god who defended the north. However, Xuanwu was always linked with the palace coup in Tang Dynasty. Emperor Taizong staged a coup in Xuanwu gate. And this time is Li Longji. Since Empress Wu abdicated her

position, the emperor Li Xian was indecisive. The imperial power turned to the Queen, Wei's hands, the royal court was quite chaotic. When the empire needed help most, Li Longji led the palace coup. Wei was killed and the order of Tang resumed. In 712 A.D., Li Longji ascended to the throne. He was the legendary Emperor Xuanzong. Under the rule of Xuanzong, Tang was cumulating to the peak.

Chapter 8

In 717 AD, the fifth year of Xuanzong, the 9th Japanese Missions to Imperial China arrived in Chang'an. When they return to Japan, they take away a lot of books and artworks. Some Chinese craftsmen were also sent by the court to help the Japanese construct temple palace. Modeled after the shape of Chang'an city, the Japanese built their own capital, Heiankyo. According to the style of the Daming palace, the emperor of Japan built his palace, Nara palace. China was the richest country in the world at the time. Diplomatic envoys of various countries all hope to establish diplomatic relations with China. Including Japan, Eastern Rome, Arabia. Totally more than 200 countries and areas had established diplomatic relations with Tang. The people from all around the world lived peacefully in Chang'an. All kinds of religious beliefs coexisted. This is the second flourishing age of the Tang Dynasty after the Zhenguan Period, Kaiyuan Period. During Kaiyuan Period, 321 crown states and over 800 frontier states were belonged to Tang. The population was over 50 million.

Chapter 9

When Xuanzong entered the old age, however, he totally gave up an emperor's responsibility. In Xuanzong's late years, he was addicted to the artistic creation and alienated from government. In November 755 AD, the military governor of the North China – An Lushan rebelled. Over 150 thousands rebel forces started from Youzhou to Chang'an. Not until the forces almost arrived did Xuanzong noticed that the empire had been no longer safe anymore. Confronted with a formidable enemy, Xuanzong chose to escape instead of defense. On June 12th, the man who used to be earthshaking left his imperial palace quietly. This incident is called "An Lushan Rebellion". It not only destroyed the government of Tang, but also acted as an important transition in the Chinese history. In 907 AD, Tang Dynasty ended. Totally 289 years. After that, no emperor built capital in Chang'an. Since then, the center of Chinese culture moved eastward.

Animation Visual

After deciding the script, the author started to think about the visual style of characters. During the process of collecting the data about the apparel of Tang Dynasty, the author felt the apparel system in Tang Dynasty is very complicate. The garments are different from time periods, nationalities, areas, ages, sex, positions and lots of elements. The author thought it would be very easy for me to made a mistake if the author draws all the character with realistic style. Considering the fact that the target audience should be age from 8 to 65, which means children should also be considered. The author decided to create a kind of cartoon style. First, the author could simplify the apparels of characters by only presenting some key visual elements of them. It could make fewer mistakes of apparels and save more time for me to do the animation. Second, the cartoon style would be more acceptable for children and the people who were not quite familiar with the apparel culture of the Tang Dynasty.

Besides the main characteristics of the apparel, the animation also presented the facial feature of the people at the Tang Dynasty. The audience can clearly distinguish the racial type by the proportion of a character's facial organs. Also, all the animation scenes elements were drawn according to the real historical relics and buildings.

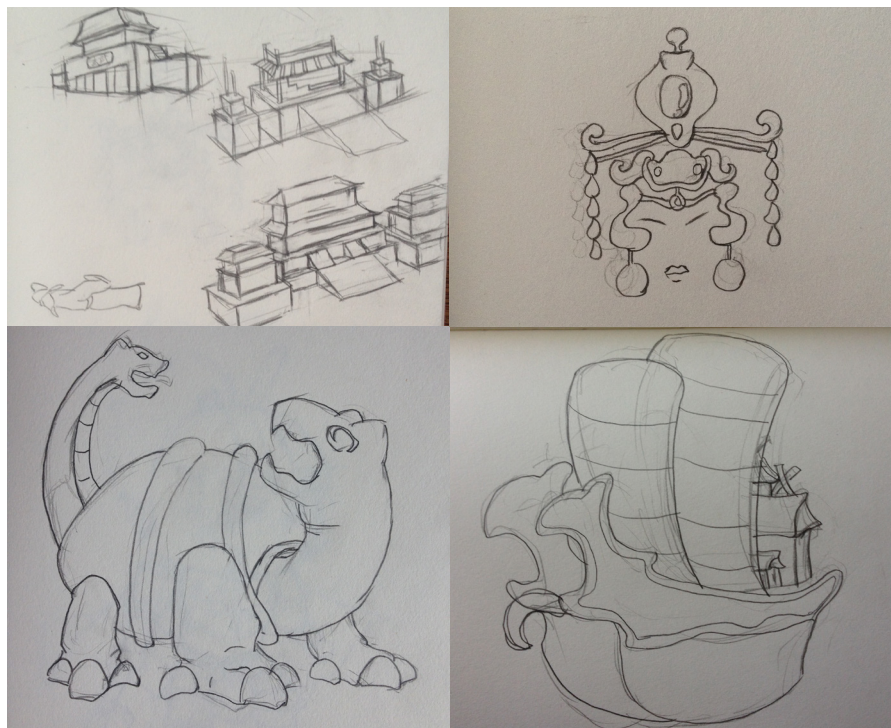


Figure 2: Sketches of some visual elements

Step 1:
Character sketches

All of the characters were sketched on my sketch books before drawing on the computer. Although it might take more time, the author still thought freehand sketching could make him showing his personal style more effectively.



Figure 3: Character sketches 1

Step 1:
Character sketches



Figure 4: Character sketches 2

Step 1:
Character sketches



Figure 5: Character sketches 3

**Step 2:
Character Illustration**

The author took pictures of those sketches. Then used the pen tool to “copy” them as vector files. Then added colors for them.

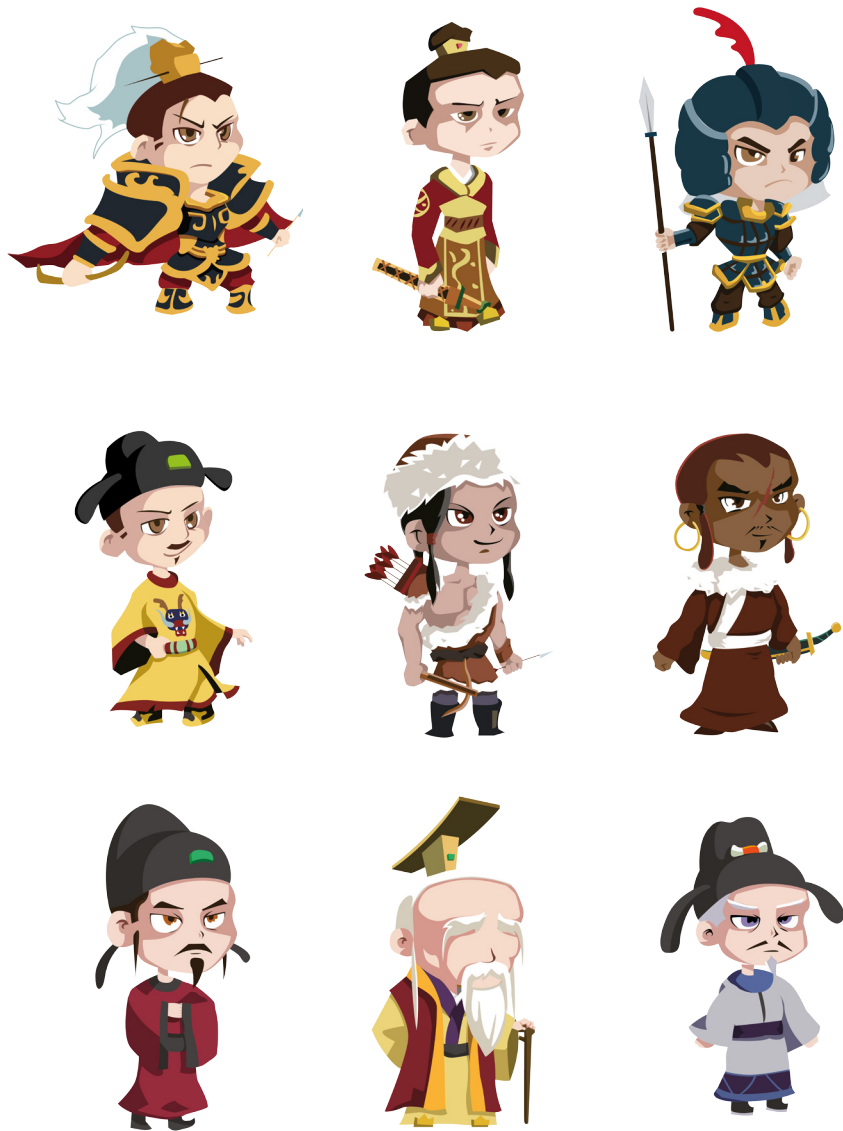


Figure 6: Character illustrations 1

Step 2:
Character Illustration



Figure 7: Character illustrations 2

**Step 2:
Character Illustration**



Figure 8: Character illustrations 3

* Totally 26 characters.
5 hours / character for average.

Step 3: Animation scenes

The nine animation scenes were mainly built according to the scripts of the stories, characters' visual style and authentic historical relics and buildings. In some animations, there would be more than one scene. When I was designing scenes for those animations, the author would also consider how those scenes convert into animations.



Figure 9: Animation scenes 1

Step 3:
Animation scenes



Figure 10: Animation scenes 2

**Step 3:
Animation scenes**

Figure 11: Animation scenes 3

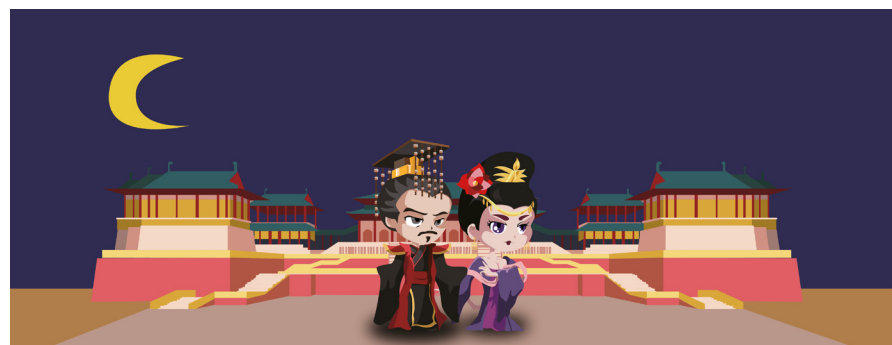
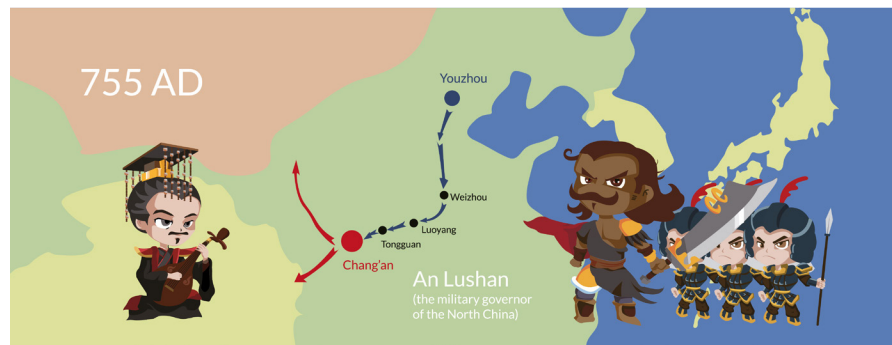
**Step 3:
Animation scenes**

Figure 12: Animation scenes 4

Animation Making

After finishing the illustrations, the author started to making animations. Since all of the motion graphics should follow the speed of the audio narration, the author recorded audio narrations first. Then the author made the motion graphics according to the narrations. Finally, the author exported the animation as individual files that could be imported to the software the author used for making the website.

Step 1: Audio Narration (Record & Edit)

The author asked John Dyer to record the audio narration for all of the animations. The author used Adobe Audition to record and edit the audio narrations.



Figure 13: Audio editing screenshot

Step 2:
Motion Graphic Making

According to the content and voice speed of the audio narration. The author started making animations by Adobe Edge Animate. The author could just copy the illustrations from Adobe Illustration and past into Edge Animate.

1. “Start” Screen

All of the 9 animations had a same visual style screen at first. In this screen, users could see the name of the animation and the “PLAY” button. Users could click the button to start the animation.



Figure 14: “Start” screen

2. Animation Screen

After clicking the “PLAY” the animation would start. The style of the motion graphic is kind like cutout animation. All of the characters were departed to several parts such as head, left arm, right arm, left leg, right leg and the main body. So the movement of characters are actually the rotating and moving of those parts.

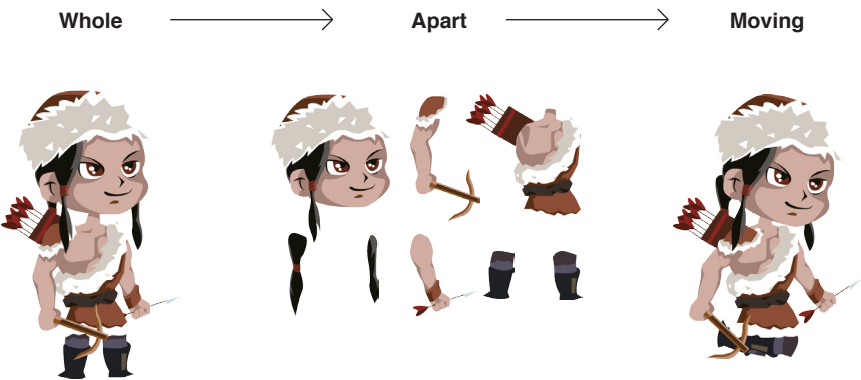


Figure 15: Character moving parts

In order to make characters get into the scene, the author added shadow for every character.

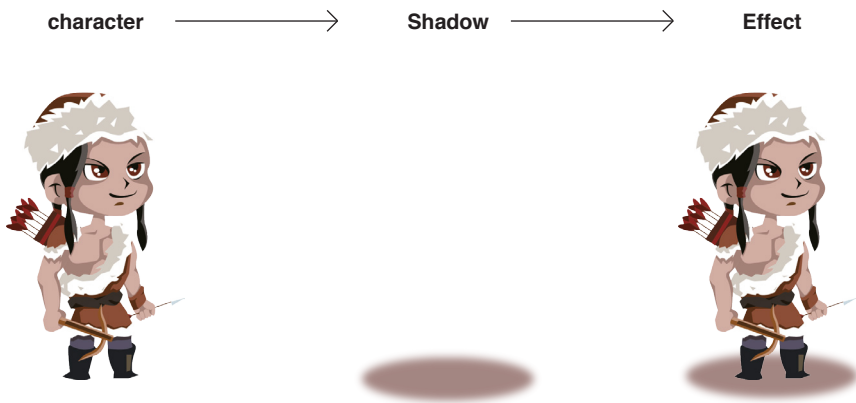


Figure 16: Character moving parts

The author added blink effect on every character. That made characters more lively.



Figure 17: Character eyes moving parts

This motion graphic included three kinds of movement: character location change, character's body movement, and background change. For the first step, the author would only move the location of characters according to the audio narration.

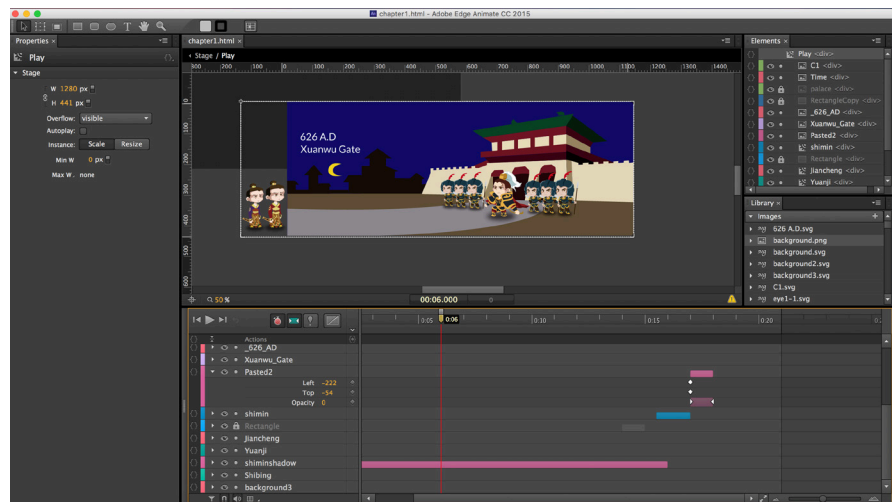


Figure 18: Animation making screenshot 1

Then, the author made background changes according to the audio narration.

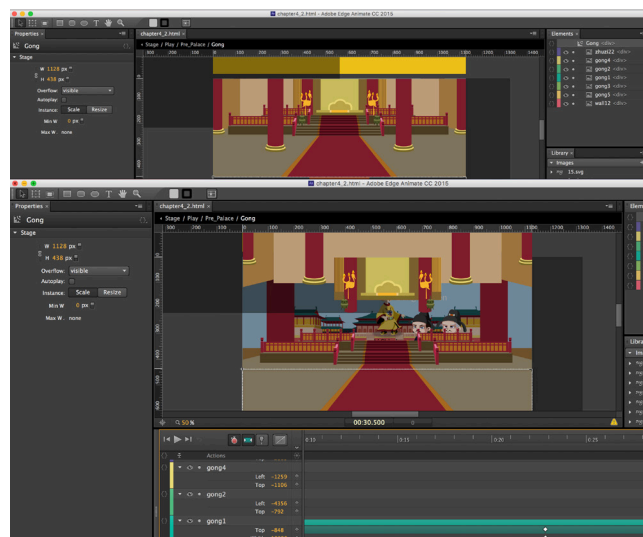


Figure 19: Animation making screenshot 2

After that, the author made body movements on every character. The author added regularly up and down on characters' head to show the regular breath and the swing of hands and legs when characters were walking. All those movements are regular. The author could just copy and paste the frames. After making those changes, the author added specific movements of characters according to audio narrations.

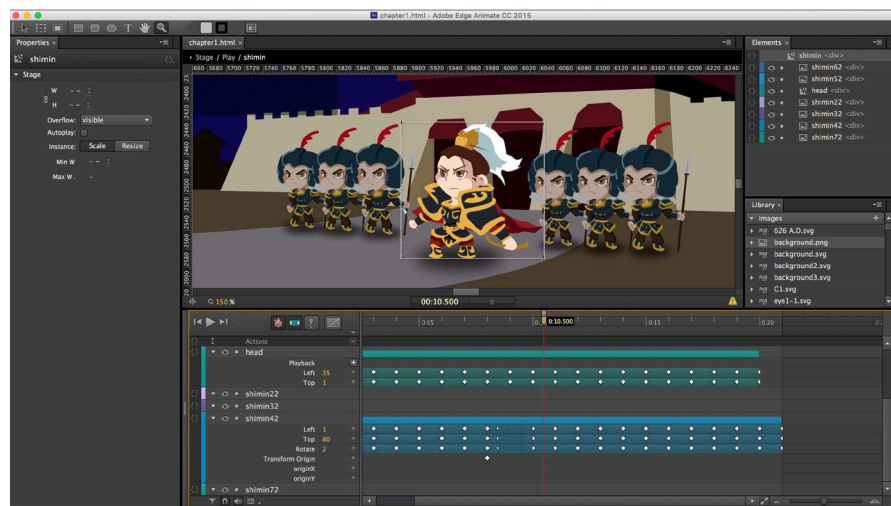


Figure 20: Animation making screenshot 3

In one animation, character location change, character's body movement and background change were converted to different symbols so that they would be easy to edit.

Finally, the author added coding on the “Play” button to make the click effect.

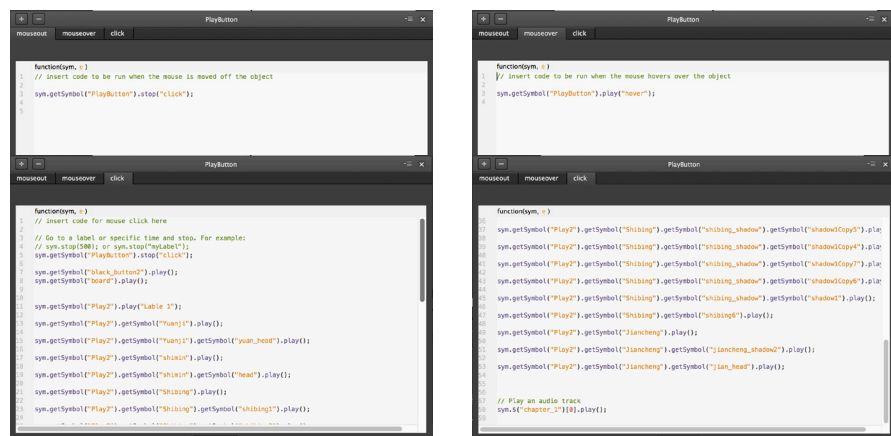


Figure 21: Animation coding screenshots

Step 3: Typography

Typography was also acted as a crucial role in animations. In order to keep the visual style united, the author only chose one font for all texts. Since texts only had certain times for users to read when animations were playing, the fonts of them should be very easy to read. It should also fit the style of the animation very well.

After finding and testing, The author found 2 font choices. One was **Lato** and another was called **Blemished**. Their styles were completely different.

Blemished

Blemished was a font the author found on the website. It looks really like a kind of font written by Chinese brush. When Blemished was tried in the motion graphic, the author thought it fitted pretty well.



Figure 22: Animation scenes (Blemished font)

Lato

Lato is a sans serif typeface family. It has totally ten styles. It was found in Typekit. The author thought Lato was not only fit the style of animations but also could be used in the text of the website.

Thin
Thin Italic
 Light
Light Italic
 Regular
Regular Italic
 Bold
Bold Italic
 Black
Black Italic

Characters

ABCĆDEFGHIJKLMNOPQRSŠTUVWXYZŽ
 abcćdefghijklmnopqrsštuvwxyzž1234567
 890‘?’“!”(%)[#]{@}/&<-+÷×=>®©\$€£¥¢;:;.,
 *

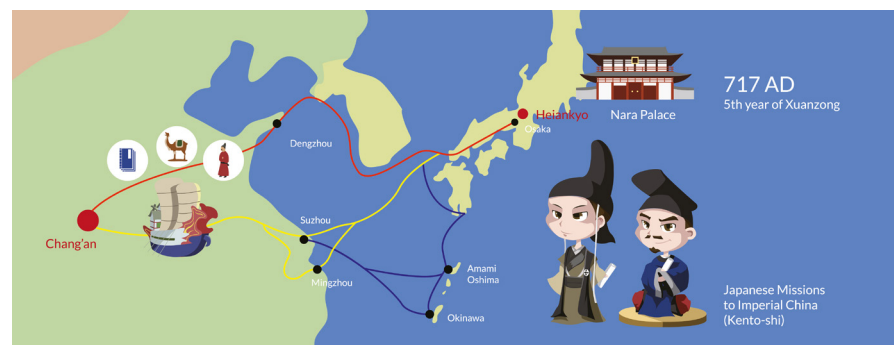


Figure 23: Animation scenes (Lato font)

Those two fonts both had positive and negative points.

Blemished

Positive: Blemished fits the visual style of animations very well. Also, it looks like written by Chinese brush. That could make the font also had a relationship with ancient Chinese culture.

Negative: Blemished doesn't fit the text of the passage. Its readability is also lower than Lato family.

Lato

Positive: Lato is very easy to read. Its font family also contains ten styles. It could be used as primary fonts of the website.

Negative: Lato could not make users think of any Chinese element.

After discussing with my advisors, the author finally chose Lato. As a font in animations, readability is more important than any other specialties.

Thin
Thin Italic
Light
Light Italic
Regular
Regular Italic
Bold
Bold Italic
Black
Black Italic

Website Layout

Since the primary function of the website is guiding users watching animations and helping users better understand them, the layout of the website should be simplified. The content of the website should be clear and easy to find.

After sketching the wireframes and discussing with professors, the author decided to choose the solution that all of the sections are on one page. By scrolling down, users could see all contents by a right order.

Section 1: Welcome

As mentioned before, the author drew an illustration as the main content of the welcome page. This illustration was the shape of “Tang.” It included lots of elements in the Tang Dynasty. From this illustration, users could have a general idea of the Tang Dynasty. Also, the title under the illustration would let users know the core content of this website.

Five icons & names showed the five sections of the website. They were clickable. Once users clicked them, the website would automatically scroll to the right position. In order to let users can click them anytime users want to, those buttons were always on the top of the screen. The round dot on top of the icon indicated the current position of the website.

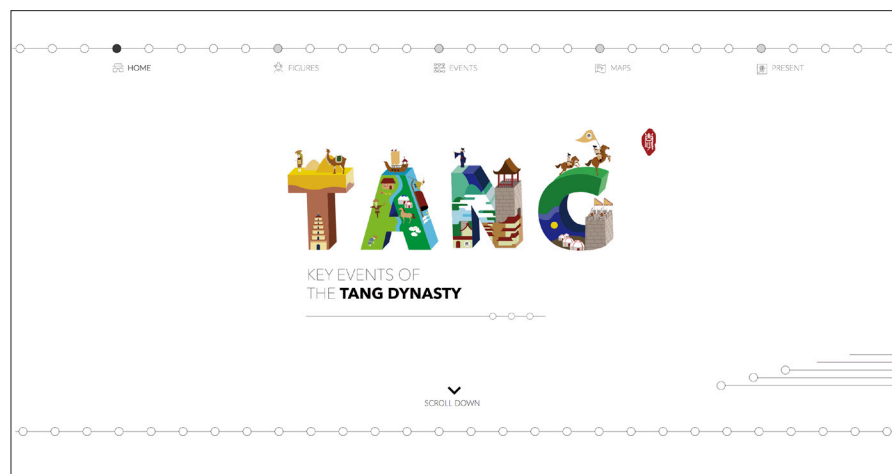


Figure 24: Homepage (Welcome part)

By scrolling down, users could see the bottom part of the “Home” section. It is a brief introduction of this website. It also told users what would they see in the coming animations.

In this part, the author planned to use scroll effect on the character. Which means users could see the character moving from the left of the passage to the front of the Daming Palace when they were scrolling the website. This scroll effect was very easy to realize through Adobe Muse.

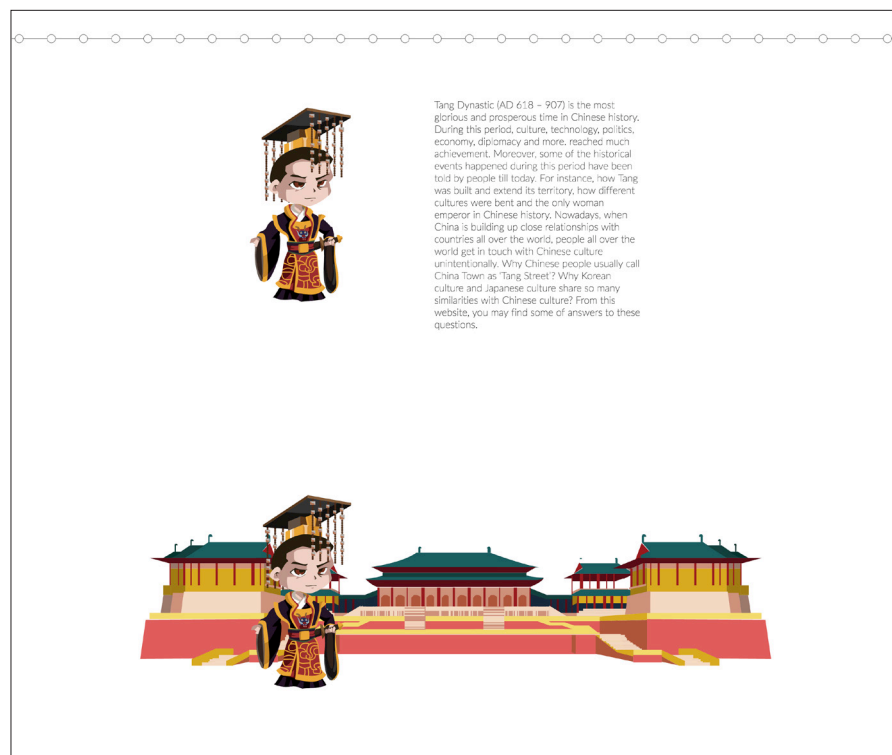


Figure 25: Homepage (Brief introduction part)

Section 2:
Historical Figures

In this section, users could see the brief introduction of all the characters appearing in animations. The section would help users better understand the animations.

Users could click the left/right arrow buttons to change characters. They can also click the specific character in the list to see his/her information.

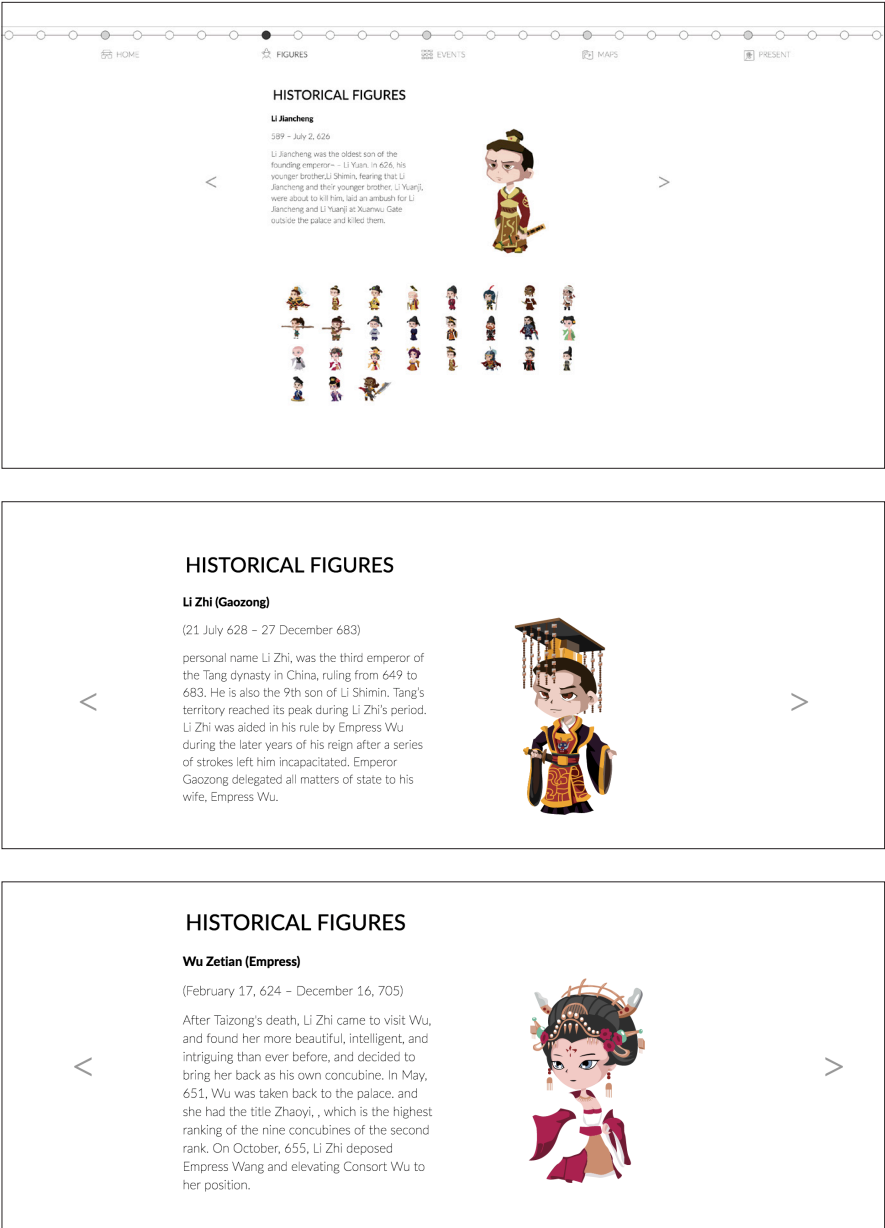


Figure 26: Homepage (Historical figures)

Section 3: Historical Events

This section showed all titles of the nine animations. All those titles had their own icons. Users could watch the animation by clicking the specific icon.

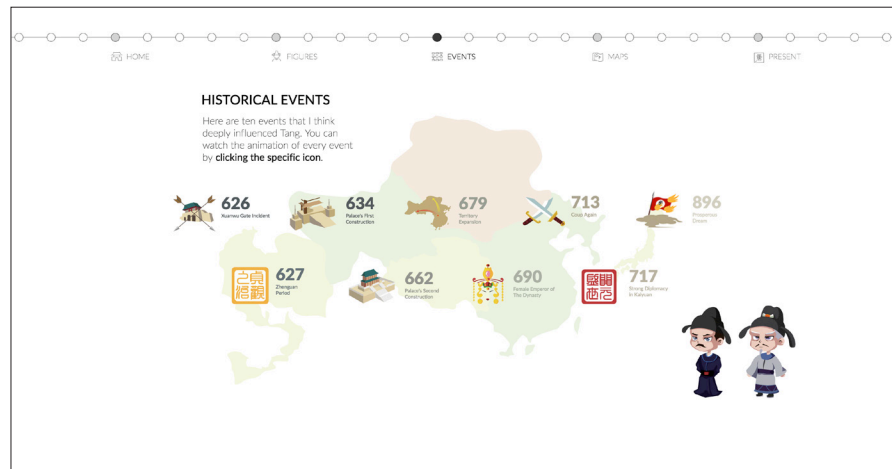


Figure 27: Homepage (Historical events)

Once users clicked the icon, they would come to animation pages. In this page, users could watch animations, read the audio narration. They can also choose the specific title to see another animations or back to home page.

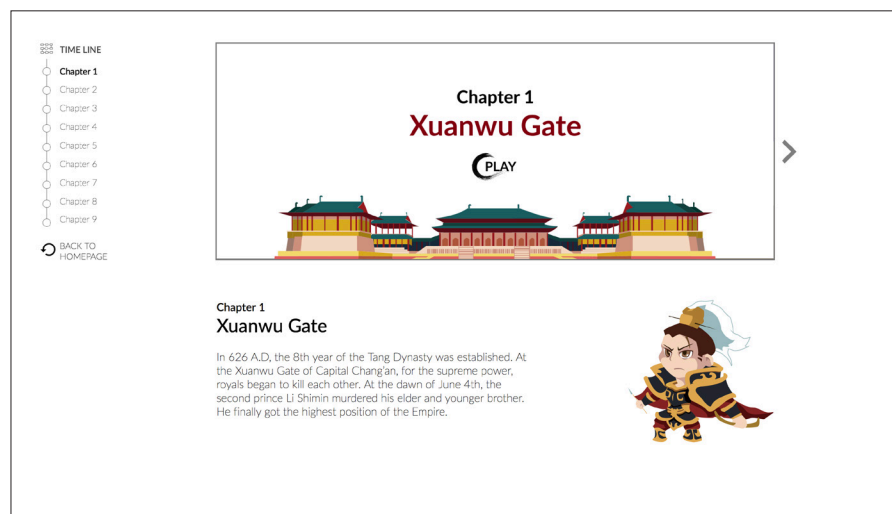


Figure 28: Animation page

Section 4:
Territory Changes

This section showed the maps of different periods of the Tang Dynasty. By automatically playing those maps on a tabbed panel, users could clearly see how the territory was changing in the same position. That could help users understand the history of the Tang Dynasty from another angle.

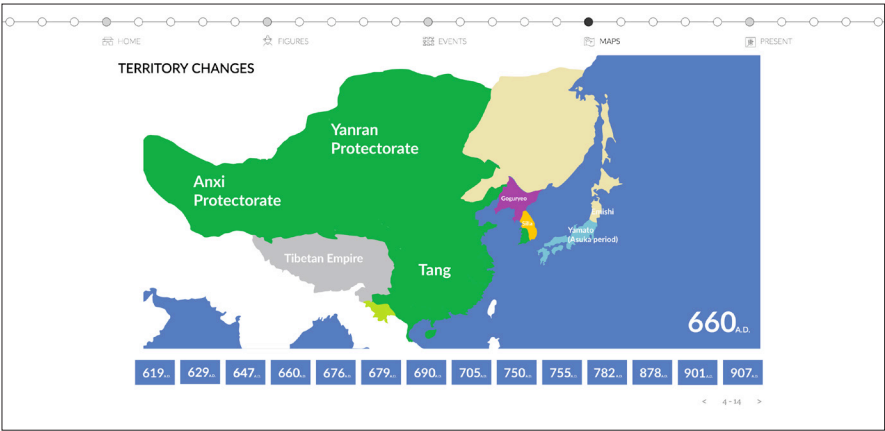


Figure 29: Homepage (Territory changes)

Section 5:
Chang'an Today

This section was actually the end words. It told users what had the Tang Dynasty left to us and how Chang'an, the capital of the Tang Dynasty, influencing China today.



Figure 30: Homepage (Chang'an today)

Website building

The main reason for choosing Adobe Muse to build the website was because by using Muse, people could create a website without writing codes. That could make people building a website quickly and won't need to spend time on coding. Also, Adobe Muse contained all effect functions that this website would need.

Step 1: Copying vector images

The first step is copying vector images from Adobe Illustrator to Adobe Muse. Since both Adobe Muse and Adobe Illustrator are the software of Adobe company, people could simply copy a picture from Adobe Illustrator and the paste it to Adobe Muse. However, if multiple images or illustrations were pasted in Adobe Muse by one time, they would be automatically grouped together. So almost all elements were copied separately. Then their position would be adjusted in Adobe Muse.

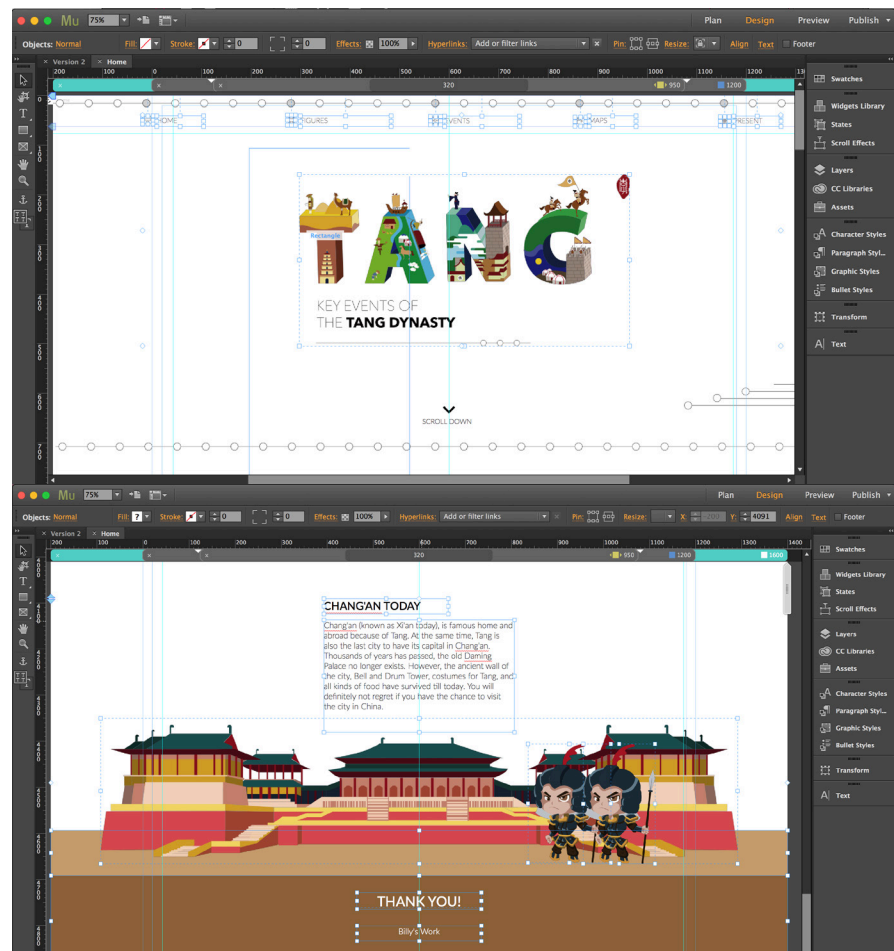


Figure 31: Website making screenshot

Step 2: Hyperlinks (Anchor Point)

Since all elements had been put in the right place, the author started adding links and effects on them.

By the order from top to down, the five buttons for the five main sections were established first. The author used hyperlink functions in Muse. This function could make the page automatically scroll to a particular position when users were clicking on a specific button. For example, when users clicked Figures button, the web page would scroll to the position of the Historical Figures section.

It needed totally 2 step to make the hyperlink effect.

First, click the Anchor button to add an anchor point and name it.

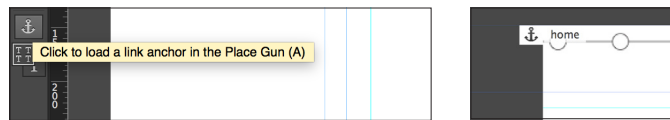


Figure 32: Hyperlink effect button

Then, choose the button to set up the hyperlink.

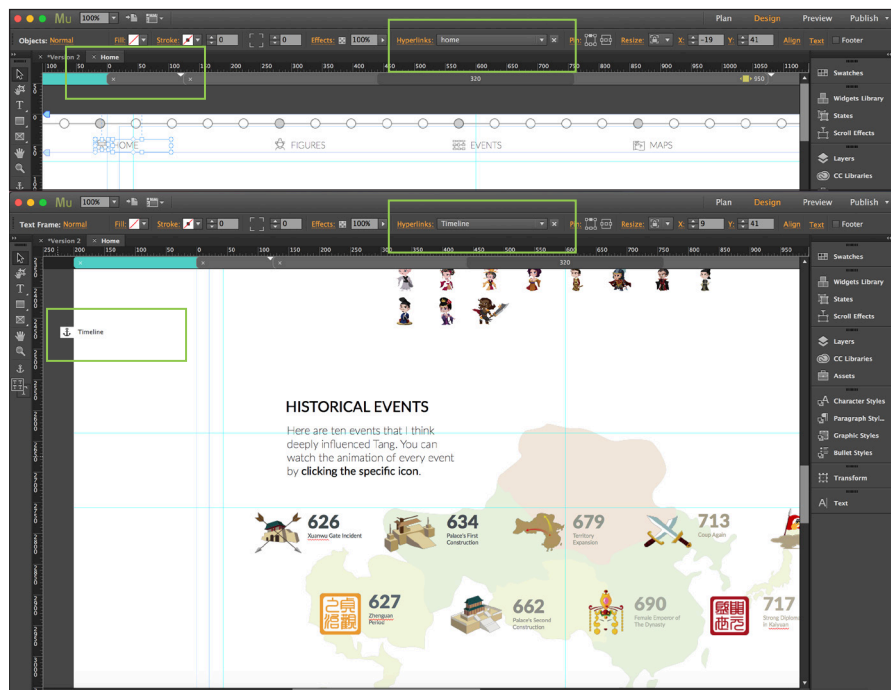


Figure 33: Hyperlink effect (Anchor point)

Step 3: Slideshows

Both Historical Figures and Territory Changes sections were slideshows. Adobe Muse had multiple slideshow mockups. The author chose one called “Thumbnails” as the mockup of Historical Figures. That mockup contained both captions and thumbnails. So it fitted the Historical Figures slideshow’s needs.

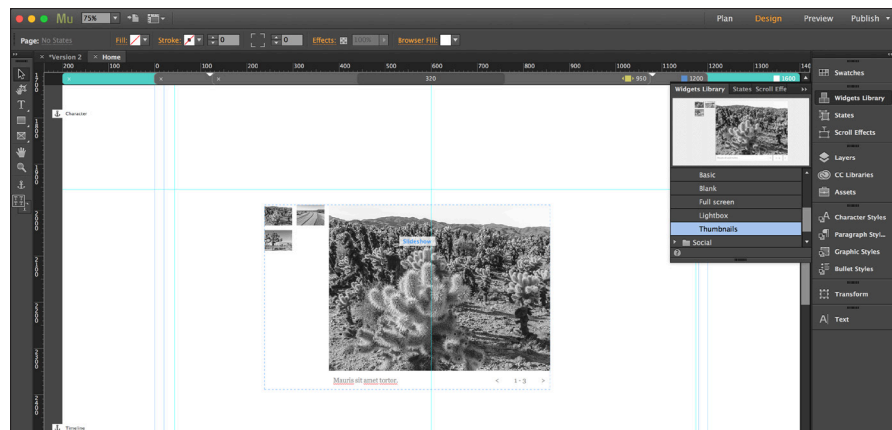


Figure 34: Slideshows making 1

All character required to be exported as png files in order to be imported to the slideshow. The author also wrote all introductions for those historical figures. After importing everything and adjusting the positions of captions and thumbnails, the Historical Figures section finished.

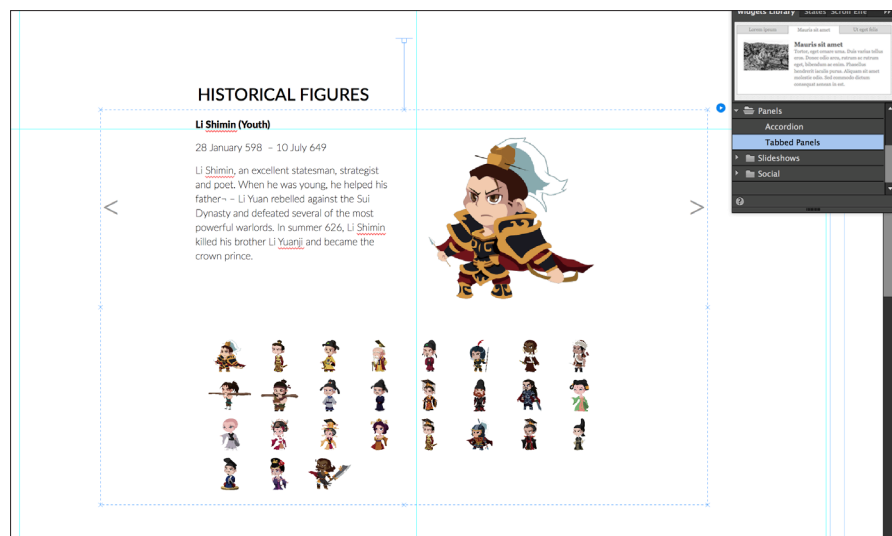


Figure 35: Slideshows making 2

Since Territory Changes didn't need any captions, the author deleted the caption part. Also, in order to let users see the details of every map clearly, the width of the slideshow was set as 100% of the web page width.

A thumbnail was automatically set as the scale-down slideshow image. In order to let users easily choose the map that shows the year they want to see, the author changed the default thumbnail image to the picture that only showed the specific year on it.

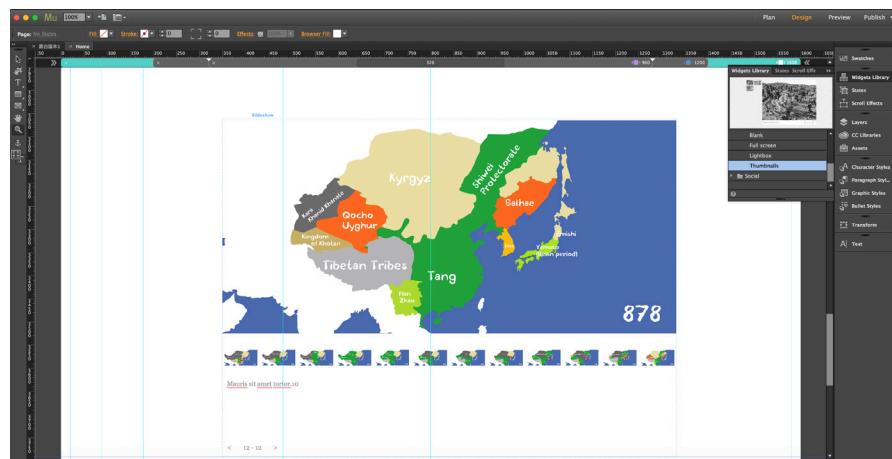


Figure 36: Thumbnail images (default)



Figure 37: Thumbnail images (updated)

Step 4: Hyperlinks (Page)

The Historical Figures section contained nine icons. Users needed to click one of them to see the specific animation on a separate web page. Just like the hyperlink between a section icon and an anchor point on the main menu, there should also be hyperlinks between the icons and animation pages in the Historical Figures section. In order to create the function of all icons, the author created nine blank pages first and named them. Those pages would be finished after the main homepage.

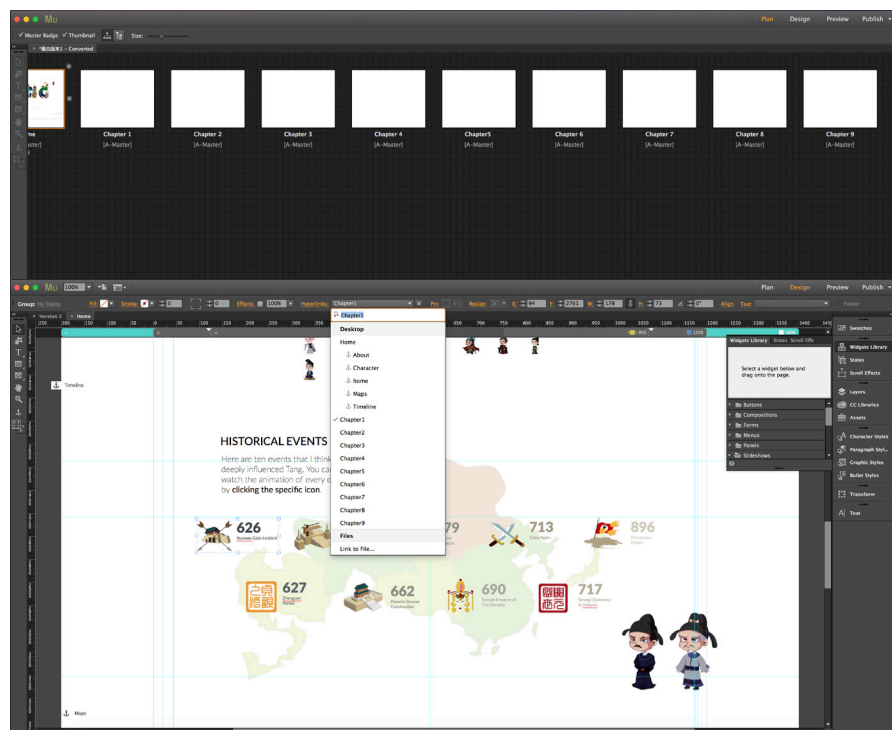


Figure 38: Hyperlink effect (pages)

Step 5: Scroll Effect

Since all of the main functions had been made, the author decided to make some interactive effect on the web page. Since the only way to browse the whole page is to scroll. The author decided to make some effect that would appear when users were scrolling. There was a fun effect called “Scroll effect” in Adobe Muse. This effect could make images change positions, opacities, and scales on a web page if the page scrolls.

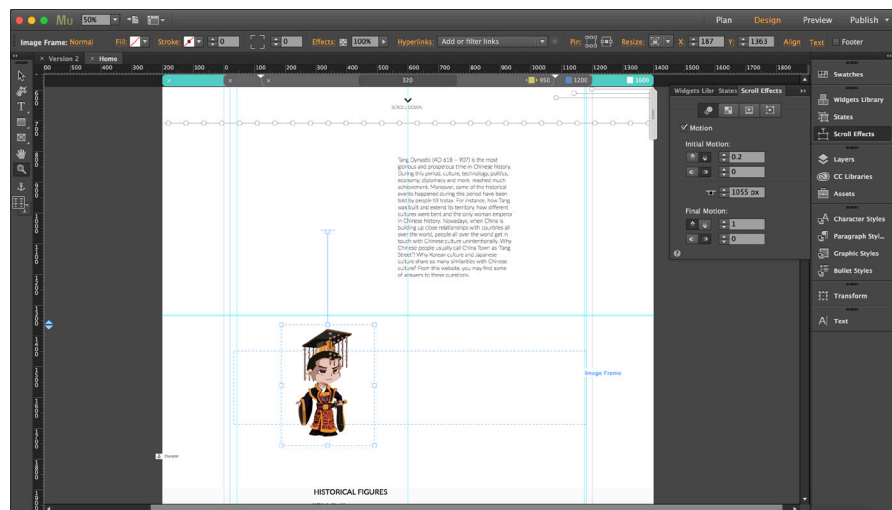


Figure 39: Scroll effect making 1

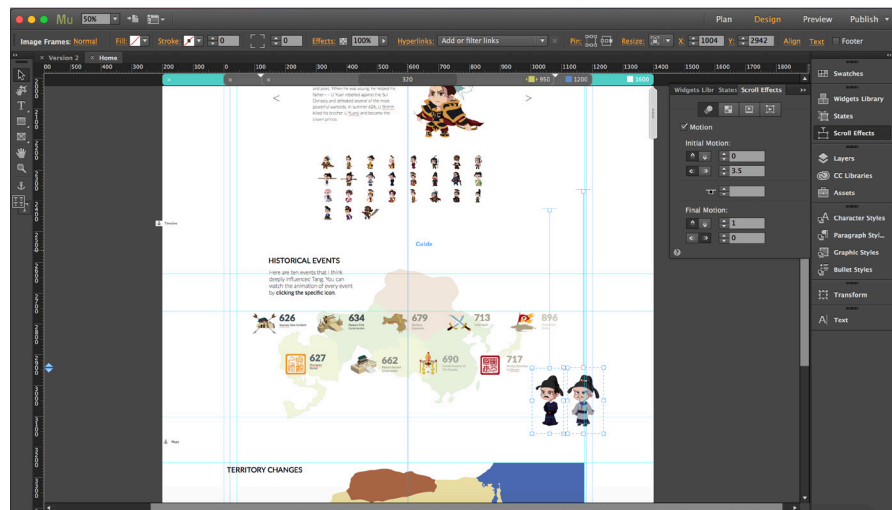


Figure 40: Scroll effect making 2

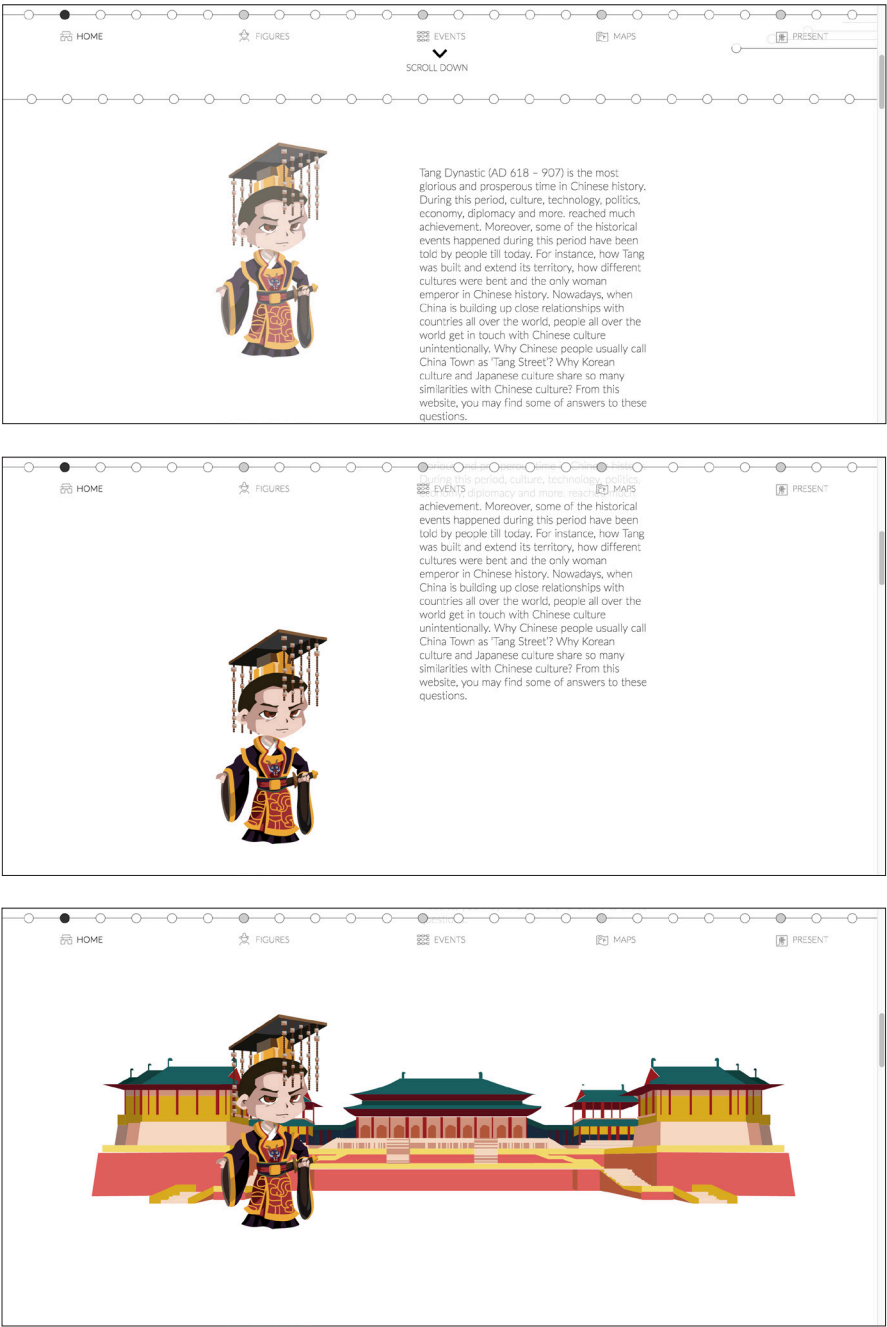


Figure 41: Scroll effect sample

Step 6: Animation Pages

First, the author exported the animations created in Adobe Edge Animate to oam files. That file could be imported to Adobe Muse. Then added hyperlinks to all of the icons on the menu. Finally, the author set different fonts for every text frame (normal, roll over, mouse down and active.)

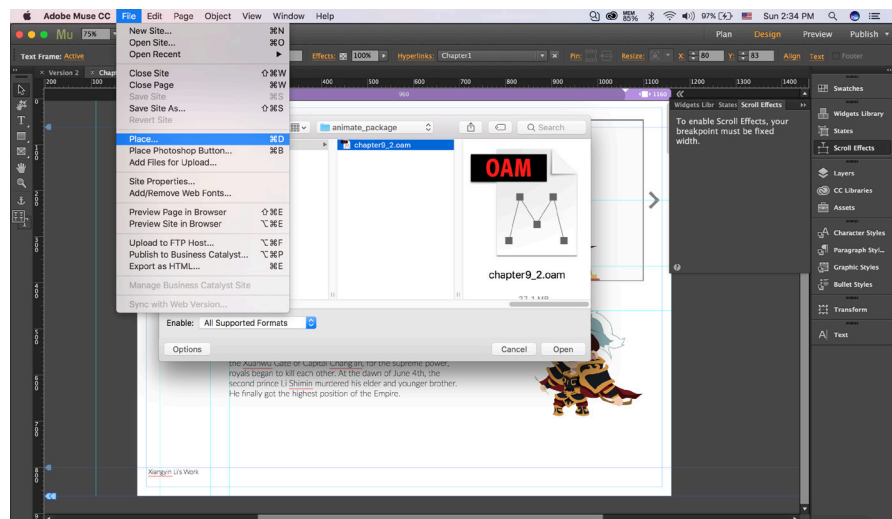


Figure 42: Export screenshot

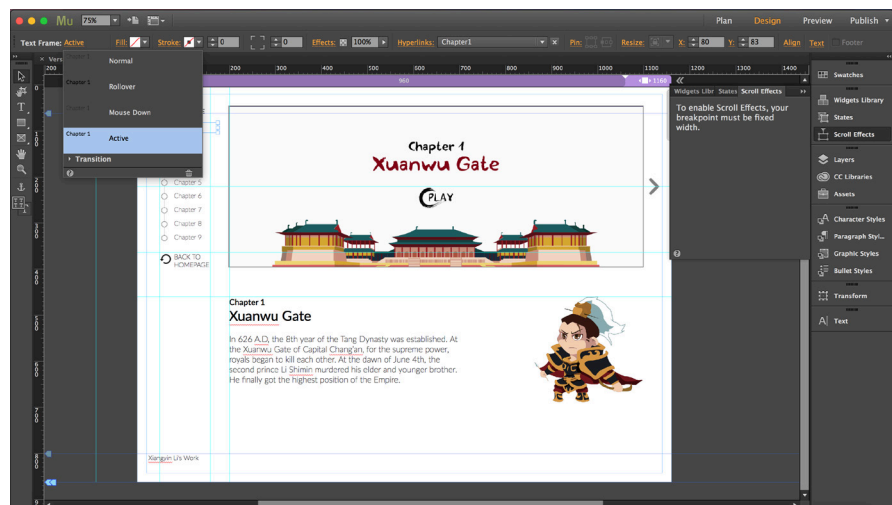


Figure 43: Text frame

Technical Problems and Solving

Some technical problems occurred during the process of the thesis. Those problems were mainly focusing on the usage of Adobe Edge Animate and Adobe Muse. Some of the technical difficulties were finally solved directly. Those technical problems that could not be solved were replaced by some other methods to achieve similar final effects.

Adobe Edge Animate

Elements were not appearing and moving at right positions when the animations playing on a browser

Every animation was played in Adobe Edge Animate several times once they were finished in order to make sure everything is correct. However, if all the animation files were copied and played on another computer, the elements were usually at wrong position when the animation was playing in a browser. Also, their movements on the browser were not as the same as they played in Adobe Edge Animate. At first, the author tried to rename those elements, layers, and files. But the problems still occurred. After several attempts, one phenomenon was noticed: if all the elements of one character were grouped as one layer in Adobe Edge Animate, those elements were always playing correctly in a browser. After dividing and grouping elements, the problem solved.

Some functions could not be added on buttons

At first, there plan to be some functional buttons appearing on the screen. Those buttons were “Play/Pause,” “Previous Chapter” and “Next Chapter.” However, those buttons could not normally work in a browser even if their codings were written correctly in Adobe Edge Animate. The author rewrote those codings but still didn’t work. The author tried to send questions to Adobe company. But the author found that Adobe company had claimed that their staff had stopped developing Adobe Edge Animate since November 2015. Finally, the “Play/Pause” button was removed, and the other buttons were moved to the outside of the animation screen. Their functions were made in Adobe Muse.

Adobe Muse

Scroll Effect could not be made in responsive website

At first, the website was planned to be responsive. However, in the current version of Adobe Muse, users could not do scroll effect if they chose a responsive design. After discussing with professors, the author noticed that compared with adaptive design, responsive design is hard to control the position of elements and it would cost more time on building the website. Finally, the author decided to make the adaptive design.

User Research and Testing

The evaluation process and feedback was vital for the thesis project. Two primary methods were used to do the user testing. One is the observation of user-interaction with the author's friends and colleagues who were interested in this project. Another one is doing surveys on the MFA Thesis Show in December 2016. These user testing had different approaches, and the goals are various, too.

Face-to-Face Interview

The user testings were taken place in Boulder, CO. The volunteer users were the author's colleagues and friends. Their jobs were UI designers, UX developers, creative directors and graduate students. Their ages were from 21 to 45. The location was the company that the author was working in. All volunteer users were told the purpose of the test and the brief introduction of the website content (exclude how to use the website.) They could leave any feedback related to the website during the process. After the testing, some leading questions would also be asked.

Questions:

Did you find any bugs or things that make you feel confused on the website during the testing?

Do those nine animations clearly tell you the stories?

Did you find any spelling or grammar mistakes on the website?

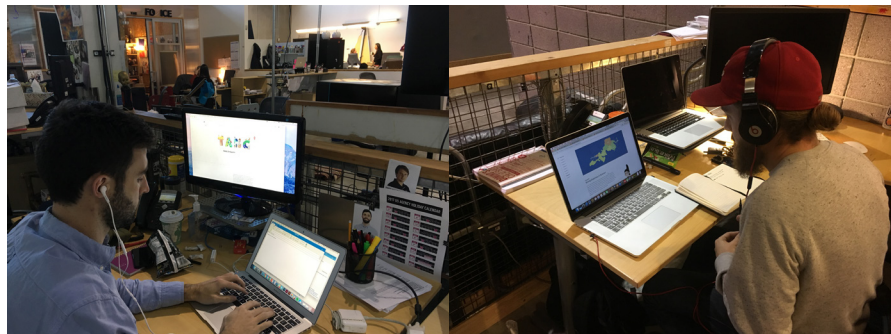


Figure 44: User testing

It took around 10 minutes for every user to test the website. All of the users explained their feedback to the author after they wrote comments down. Unexpectedly, none of the two feedbacks were contradicted each other. Most of the feedbacks were telling around user experiences and copywriting. Some typical feedbacks were listed below:

Add directions on the website

Before the user testing started, there was no scroll direction on the welcome page. Most of the users didn't know that they could scroll the website.

Add headers for each section

Before the user testing started, there was no title on every section. Users could only know current section names by the small text of active status icon on the menu bar.

Add “back” buttons at animation pages

Before the user testing started, at animation pages, users could go back to the homepage by clicking the “TIMELINE” icon. However, most test users didn't know that function. They had to click the return button on the browser to go back to the homepage.

Turn off the autoplay effect of slide shows

Before the user testing started, both the slide shows of historical figures and territory changes were set auto playing. Users sometimes could not read all text. They also couldn't choose a map and see it carefully.

Adjust anchor points to right places

Some anchor points were not at the right positions although they seemed at right places in Adobe Muse. They were modified to fit the right position on the browser.

Change some title names and text

Some text on the website was not enough official. They were updated by the writing center of RIT library after been pointed out.

Thesis Show
Survey

The thesis show was conducted on December 8th in the Visual Communication Design Lab at RIT. The testers were the people been invited by respondents. Most of them were RIT alumni. Some of them were professors.

All of the testers were asked to complete a survey (evaluation form) when they were testing the thesis project.

EVALUATION FORM

Thesis Project
Xiangyin Li
MFA Visual Communication Design

WEBSITE DESIGN	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied
Importance of Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of Use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to learn Knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall Satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ANIMATIONS	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied
Illustration Style	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of Learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Narration Content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall Satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MORE COMMENTS

Figure 45: Evaluation form

Thesis Show Survey

Results from the thesis show demonstrated that the content and visual style of animations were recognized. Most of the users mentioned that they love the visual style of the characters and animation scenes. Also, some useful improvement suggestions were left:

Add dramatic ending on the homepage

Since there was a static illustration at the end of the homepage, Some users would like to see some cool motion graphic or scroll effects.

Add control buttons for animations

Besides the “PLAY” button, users suggested adding more functional buttons such as “Pause” and “Next Chapter.”

Those buttons were planned to be added at first. However, Adobe stopped developing Edge Animate since November 2015. After that, adding codes for those buttons would always cause the software crashed.

Add captions for animations

Instead of putting narrations under the animation screen, some users would prefer to add it to the animation screen. Which means, adding captions for the animation.

Update the icons of the website to make them easier to read

Some of the icons could not be easily understood or found by users. Their visual style and positions should be updated to make better user experience.

The Solution and Conclusion

This website combines historical knowledge with graphic design and interactive technologies. This method provided a more interesting environment for people to learn Chinese history.

In subject matter, the website solved the problem for both people who cannot understand the complex content of Chinese history and the people who felt dull when learning history from the text. Incorporated historical knowledge into animations also attracted children to learn history. This website provided an easier way to learn Chinese history. The method of this project could also be used as other areas for people to learn different pieces of knowledge in the future.

This website also has great potential for further growth. The next step of the project will focus on these aspects:

- 1 Updating the visual effects of both the web pages and animations according to the feedbacks from user testing, thesis defense, and thesis show.
- 2 Exploring new software to do the animation part since Adobe Edge Animate was no longer being developed.
- 3 Create new event animations for other China Dynasties.
- 4 Explore new media to show the content of the project. For example, mobile app, VR app or Smart TV app.

Appendix

Original Thesis Proposal

Interactive Dynasty: An Effective Way to Learn About the Tang Dynasty History

Xiangyin Li

Thesis proposal
MFA Visual Communication Design

2

Xiangyin Li

Rochester Institute of Technology
College of Imaging Arts and Sciences
School of Design
MFA Visual Communication Design

**Title: Interactive Dynasty:
An Effective Way to Learn
About the Tang Dynasty
History**

Submitted by: Xiangyin Li

Date: October 1, 2014

Thesis Committee Approval:

Chief Thesis Adviser: Daniel Deluna, Visual Communication Design

Signature of Chief Thesis Adviser

Date

Associate Thesis Adviser: Shaun Foster, Visual Communication Design

Signature of Associate Thesis Adviser

Date

Associate Thesis Adviser: Chris Jackson, Visual Communication Design

Signature of Associate Thesis Adviser

Date

MFA Thesis Candidate: Xiangyin Li

Signature of MFA Thesis Candidate

Date

Thesis proposal

Interactive Dynasty: An effective way
to learn about the Tang Dynasty history

3**Abstract**

Today, interaction design is applied to multiple areas of visual communication and instructional design. Interactive elements can be found in websites, apps, and kiosk terminal equipment. Through the integration of interactive content such as step-by-step tutorials, the user can acquire a variety of different types of information efficiently and effectively to learn about historical events.

China has one of the longest and continuous cultures today. It's own unique charisma attracts many history buffs to learn more about important historical events. Kiosk terminals in history museums have successfully provided a learning environment for users to learn about China through interaction design. My thesis will take advantage of these museum kiosk terminals and turn them into a more widely used tool via an online website. Specifically, my thesis will focus on designing interactive content regarding the history of the Tang Dynasty.

The Tang Dynasty is the best-known dynasty of ancient China. My goal is to discover how people could learn about it through interesting interactions without having to read historical books. How could people become familiar with history through a non-linear interactive website, instead of watching documentaries or reading text book which follow a linear story? How can I design a historical timeline about the Tang Dynasty that is convenient to use and learn from without the user having to go to museums? These are the problems I intended to solve using interaction design. The goal of this thesis is to make an interactive website to learn about the Tang Dynasty.

Web design offers a wide range of interactive possibilities. So my thesis project will focus on:

- 1 **User interface layout:** well-designed site with a functional timeline
- 2 **Integrated content:** designed modularly into small topics for better retention
- 3 **Interactive informational graphics:** assist in explaining complex historical events
- 4 **Motion graphics:** animated historical events that lead to the rise and fall
- 5 **Audio narration:** compliment the visual elements to assist in learning

Keywords:

Tang Dynasty, China, interaction design, UI design, UX design,
motion graphics

4

Xiangyin Li

Problem Statement

China is one of the world's oldest and richest continuous cultures, being over 5000 years old. The country attracts millions of people who are curious about its history. Users seeking to learn more about Chinese history have the following choices available: books, video documentaries, and the terminal kiosks in museums. Reading history books could be boring for more visual learners. Documentaries are a passive experience where the user watches a linear story. My inspiration came from the terminal kiosks in a Chinese history museum. However, these terminal kiosks are usually permanently installed in a specific place and are not mobile. For example, you can only use them in the specific museums. Also, it is designed for users using a short time to scan but not sit and learning carefully. Designers of these kiosks have also included lots of text on every screen. My design focus on communication design in allowing everyone to learn about the history of the Tang Dynasty at home in a more visual and interactive way. Users can learn what they want to know by watching animation, listening to the narration, and clicking on interactive content.

The target audience for this website is individuals who are curious about the Tang Dynasty history. The core content of the site would be the major events that occurred during the period between 634AD to 896 AD, which is the completion and destruction year of the Tang's royal palace – Daming Palace. I will use interaction design, motion graphics, and illustration to visualize the historical events. I will first research and structure the data about the Tang Dynasty. Then I will use illustration software (Adobe Illustrator) to draw the graphic elements for the animation and the user interface's layout. After that, I would use animation software (Adobe Flash) to make the motion graphics pieces. Finally, I combine all of the content using web design software (Adobe Dreamweaver) to create the entire website.

My goal is for people to learn about the Tang Dynasty history at their own pace in a relaxing and visually interesting way. My goal is providing an interactive model or template for other historical online sites.

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5**Survey of Literature**

For my thesis project, I want to create a historical timeline of the Tang Dynasty and build it into a website. My goal is to show historical facts about China during the Tang Dynasty. These historical events include: how the Tang Dynasty started and why China was the center of world during that period. The historical timeline will describe the citizens and imperial families' living conditions. Since I really like history, I want to make a website to show the history line from the birth to the destruction of Tang Dynasty's royal palace – Daming Palace. During this period, the users will see how an empire expanded its territory, developed its diplomacy, strengthened its army, and how such powerful empire came to the end. I will provide a complete website and also showcase my design process from start to finish for my Thesis presentation.

Subject Matter**The heart of Chinese poetry****Greg Whincup****1987**

This book resolved 57 of the greatest Chinese poems in detail. It let those poems come alive for Western readers. The author thought that none of the Chinese poems are aliens. They are all human's culture. Poetry is the heart of Chinese culture. So the heart of Chinese poetry beats in us, too. From this book, I can easily know how to resolve the Chinese poems of Tang Dynasty to all users in an understandable way.

Empress Wu the Great: Tang dynasty China**Woo, X. L.****Algora Publishing****2008**

This book supplies the history of the only female emperor in Tang Dynasty in China. It mainly focuses on the entire life of Wu Zetian. It explains how and why Wu Zetian became the Emperor. It also tells how she developed the society of China during that period. This book will be useful in organizing the history content.

Li Shi Min, Founding the Tang Dynasty: Strategies that Made China the Greatest Empire in Asia**Hing Ming, Hung****Algora Publishing****March 2013**

This book supplies the history of Sui Dynasty to the end of Tang Dynasty in China. It mainly concentrates on the history of the royal family. It discusses the cause of Tang Dynasty's creation. It also tells how the emperors rule the entire country and the situations and development of that period. This book will be useful in collecting content of my design.

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History of Imperial China : China's Cosmopolitan Empire : The Tang Dynasty**Lewis, Mark Edward****Harvard University Press****June 2009**

This book mainly records the details about the society of Tang Dynasty. It describes such as the geography, foundation, warlords and monopolists, religion, urban and rural life of the empire. It also shows the map of China in different time. The author also discusses the Chinese culture, arts and constructions culture. It is a useful book for me to find lots of detail and data about Tang Dynasty.

Daily Life in Traditional China: The Tang Dynasty**Benn, Charles D.****Greenwood Press****December 2001**

This book mainly records the details about the daily life of people in the Tang Dynasty. It describes lots of aspects such as house and garden, clothes and hygiene, food and feasts, leisure and entertainment. It also shows the public service such as the crime and punishments, sickness and health. It covers the history, philosophy, religion, literature, art and other disciplines to the nitty-gritty of ancient China. It is a useful book for me to integrate the information about Tang Dynasty.

Daming Palace**Tiemu Jin****Production Co: Xi'an Qujian Film & TV Investment Group Company****<http://english.cntv.cn/program/documentary/20111118/100113.shtml>****9 September 2009**

This is a very excellent documentary of Daming Palace. It describe the history of Tang Dynasty by 6 parts. The parts are devided by time period. The content is comprehensive and exhaustive. I could get lots of data from this documentary. Actually this documentary also contained some funny stories which I could not find from other places.

Technology**How to design website****By Alan Pipes****Laurence King Publishing 2011**

This book shows website aesthetics and showcasing example of good design. It demonstrates how you finish a well designed website without the need for costly programs. This book includes code, layout, text and typography. It also contains image and color schemes. This book would help me to complete the website by teaching me the coding and design principals.

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7**Design Tuts+****2014 Envato Pty Ltd.****<http://design.tutsplus.com/tutorials/create-a-gentle-flat-oriental-pattern-in-adobe-illustrator--cms-20952>**

This is a tutorial about how to draw simplified oriental pattern in Adobe Illustrator. In this tutorial, I learned some effective way such as how to make lines and shapes symmetrical and how to make geometric arrangement of curves. The tutorial made 3 examples: sakura, folding fan and lantern. All these oriental things may appear in my website. This tutorial is in a website called "Tuts+". It is a tutorial website which provides thousands of tutorials and most of them are free.

CSS3 Animation Cheat Sheet**<http://www.justinaguilar.com/animations/#>**

This website introduced some useful effects of CSS3 animation. The designer use a head portrait as the demonstration. And make some buttons for different effect. When you click the icon, the portrait will play the effect. At the end of the page, there is a download button. If you click it, you can download the css code of all the effects displayed on the page.

Create Different Styles of Hover Effects with CSS3 Only**2014, Mar 03****<http://www.queeness.com/post/16216/create-different-styles-of-hover-effects-with-css3-only>**

This article instructed me to make a hover effect on the thumbnail by showing the code of CSS3. With this effect, we can add some additional information on thumbnails. I would adjust the code depending on my style. It may be used to show the titles of different chapters.

Creative Button Styles**<http://tympanus.net/Development/CreativeButtons/>**

This website is a demonstration of some useful and well-designed button hover effects. There would be a group of icons and buttons in my website. I could learn its coding by see the elements by my browser. There are also some press button, creative link and icon hover effects. You could watch them by clicking the link on the bottom of the page.

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Design**Digital illustration****By Lawrence Zeegen****Roto Vision Publishing 2005**

This book resolved some graphic designers' works. And those works are distributed by their style. The book tells how different graphic designers thought and how to put what they thought on the papers. Some of the works have steps to teach you how to achieve the effect. This book would help me to select a kind of style of the animation and also upgrade my skill of the illustration.

Vector graphics and illustration**By Jack Harris and Steven Withrow****Roto Vision Publishing 2008**

This book combines graphic design and skill tutorial together. It contains the portfolio and viewpoints of different graphic designers. It also includes the tutorials of how to draw the vector diagram by computer software. This book would help me to complete the illustrations of the animation by using the computer software (Adobe Illustrator).

Never use pop-up windows**By Anneloes van Gaalen****BIS Publishing 2010**

This book tells me over 50 ridiculous web rules. Although I think some of the rules still need to be considered, they still represent a part of users' viewpoints. I would figure out how and why the author held these opinions. That would be helpful to me to collect and learn the user experiences.

Don't make me think**By Steve Krug****New riders Publishing 2006**

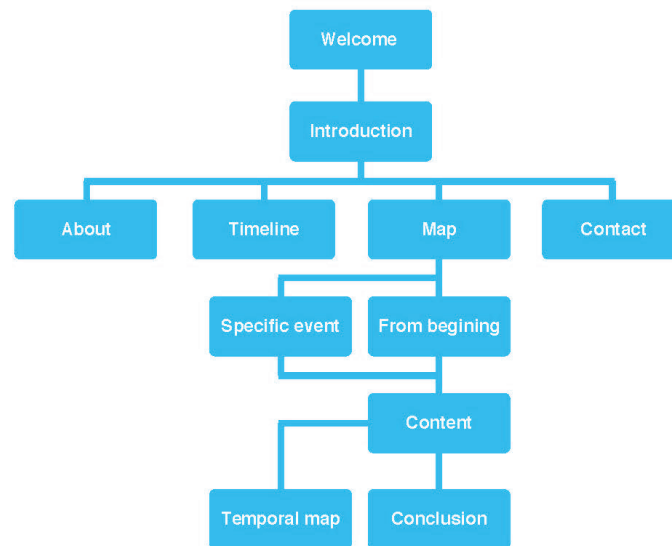
This book tells me about the user experiences rules and principles. Such as how to take full use of the web and how the users scan the billboard. It also points out the key steps about how to design the home page and how to avoid the common problem about usability. It really give me lots of useful experiences and recommendations of designing the interaction part of the websites.

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9**Design Ideation**

I will make a handbook to present all the visual components and data of the project. The handbook would have three main chapters. One is the concept of the project. One is the sketches and final effect of the website. It would include layout, icons and all characters, backgrounds and other components of the motion graphics. The third one would be all the commentary content that would be displayed by text. I will print it out and the size of the page would be letter size.

Flowchart

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Sketches



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Methodological approach**Methodological Design**

My project is a website which will let people learn about the Tang Dynasty through interaction design. Ten events will be added into the timeline. You can select a specific event or start from the first. Every event has animation, text and audio narration. The interactive part will consist of different icons on the websites. It will include the event point on the timeline and some other functional icons. The content of the audio narration and the motion graphics will be the data of the events with a visual narrative style. Every event page will have an animation of at least 8 seconds and the audio narration would be 15 seconds per event.

Target audience

The target audience would be individuals who are interested in Tang Dynasty history. Also they might need basic computer experience, and the language skill of English.

**Anticipated hardware
/ software components**

Mac OSX & Win 7 System
Adobe Illustrator
Adobe Flash
Adobe Dreamweaver
Adobe After Effect
Adobe Audition
Adobe Muse
WIX

Implementation Strategies

- 1 Collect the data of major events that occurred during the period between 626AD to 896 AD, which is the completion and destruction year of the Tang's royal palace – Daming Palace. I will get this data from websites and the books I borrowed from library. Then I will organize and summarize this data. The goal is to determine what I need to use in the timeline. Create a timeline with the corresponding data.
- 2 List all the functional icons. Think of the layout. Draw the wireframes of the website. Ask my advisors and other friends to give feedback, and make adjustments.
- 3 Sketch and draw the illustrations of the motion graphics. I will refer to the buildings, clothes and other design elements which present the ancient Chinese culture. I would generalize them and draw the illustrations with cartoon style.
- 4 After finishing all the graphic elements, I will start to make motion graphics.
- 5 Make the website.

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Competitions**Dissemination**

I will first register the domain name. After that, I will use this website to participate in some website or historical competition. Also I will try to contact some history associations and online historical websites and show my project to them. Try to persuade them to put my work on their homepages or send to their members. Because my contact information would be on my website so that I could get feedback from users and update the website. Finally, if my website was accepted by most of the users, I would send it to some education agencies and let them evaluate if the interactive method of learning in my website could be used in education.

Communication Arts

<http://www.commartarts.com/competitions/design>

iF Student Design Award

http://www.ifdesign.de/student_index_e

UCDA Design Competition

<https://ucda.com/competition.lasso>

AIGA Design Competition

<http://www.aiga.org/justified/>

Evaluation Plan

I will put the historical data, animation and website layout on my blog. And also solicit feedback in the form of online surveys from my target audience. I will also get some valuable suggestions from imagine RIT. I will keep updating my project by analyzing the feedback and discussing with the users every week. List all the possibility and summarize them. My analysis would be qualitative and quantitative, also timely.

Pragmatic Considerations

Printing cost for promotional poster & business card	\$50
Printing cost for documentation book	\$50
Purchasing domain	\$20
Purchasing web hosting Service	\$100
Printing cost for handbooks	\$100
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Total	\$320

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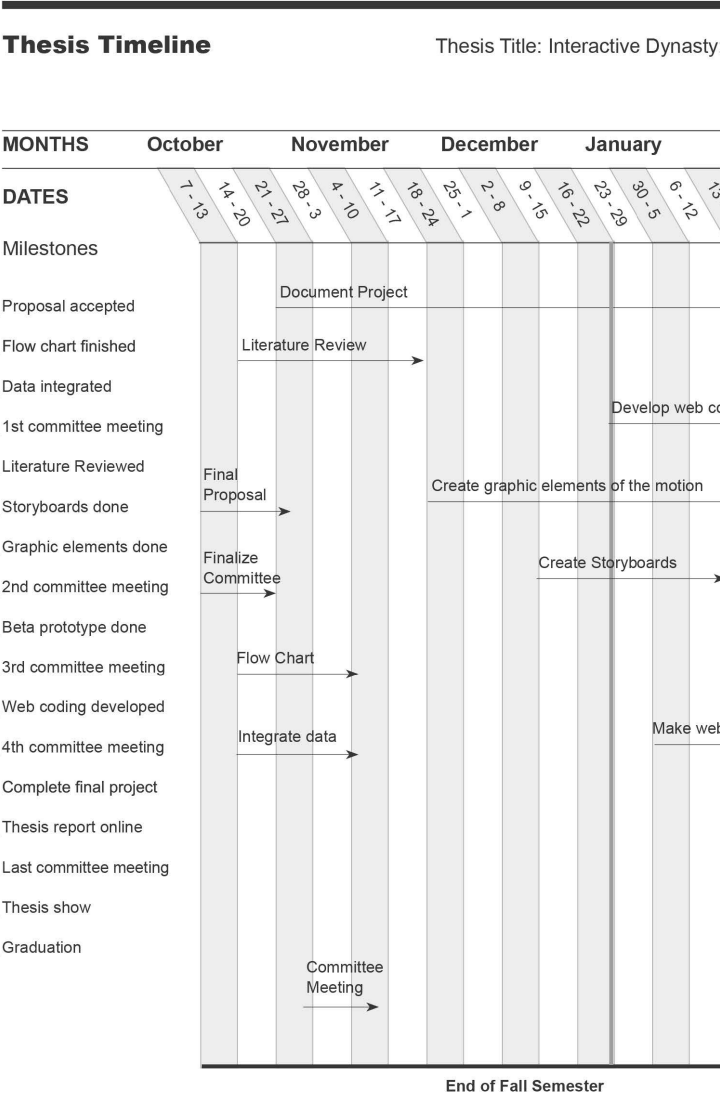
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